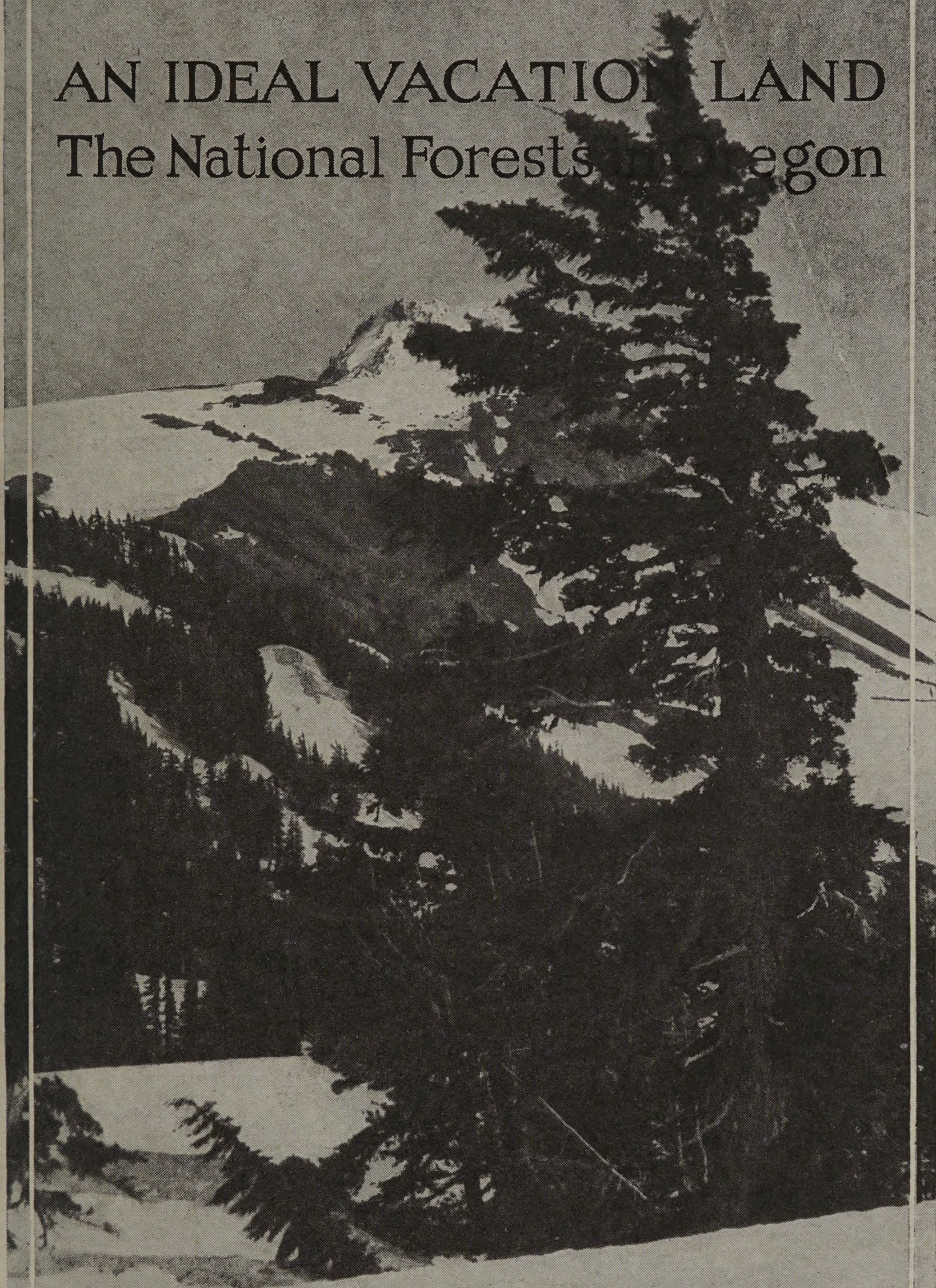


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AN IDEAL VACATION LAND
The National Forests of Oregon



UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE - - - 1 9 2 3

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CONTENTS.

	Page.
Foreword.....	I
Forest officers cooperate.....	2
Conditions in the Oregon National Forests.....	2
Livestock and scenery.....	5
Individual National Forests.....	5
Cascade National Forest.....	5
Crater National Forest.....	8
Deschutes National Forest.....	10
Fremont National Forest.....	13
Malheur National Forest.....	15
Ochoco National Forest.....	16
Mount Hood National Forest.....	18
Santiam National Forest.....	23
Siskiyou National Forest.....	26
The Oregon Caves.....	28
Siuslaw National Forest.....	29
Umatilla National Forest.....	31
Umpqua National Forest.....	33
Wallowa National Forest.....	37
Whitman National Forest.....	38
The Skyline Trail.....	42
Information for campers.....	44
Basic rules for preventing forest fires.....	44
Outfit and clothing.....	44
Food supplies.....	45
Camp cookery.....	47
Cooking for a small camp.....	47
Crane for camp kettle.....	48
Dutch ovens.....	48
Recipes.....	48
Disposal of refuse.....	49
Packing.....	49
Code of lost and distress signals.....	52
Accidents.....	52
Administration of the National Forests.....	53
Fish and game protection.....	54
Unprotected birds.....	54
Handling killed deer.....	55
Six rules for sportsmen.....	56



DIRECTORY OF NATIONAL FORESTS IN OREGON.

GEORGE H. CECIL, District Forester,
District office, Post Office Building, Portland, Oreg.

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The view on page 1 of the cover is a reproduction from a photograph of Mount Jefferson, Santiam National Forest, showing forest and snow peak.

AN IDEAL VACATION LAND.

THE NATIONAL FORESTS IN OREGON.

Prepared by the FOREST SERVICE.

FOREWORD.

WHEN, tired of the daily grind, you say to yourself, "I need a vacation," your first thought is to get away from civilization and its trammels. Your next is to find interesting and health-giving recreation. In the National Forests in Oregon you may find both, and much besides. Within their area of 13,000,000 acres are many regions of unsurpassed scenic beauty. These Forests include all the important mountainous parts of the State and all the glacier peaks, and offer every opportunity for enjoyment to those who seek rest and recreation. Camp sites amid surroundings of rare beauty, with water and forage near at hand, can be found in abundance. The mountain streams offer excellent fishing, and game of various sorts is plentiful on most of the Forests.

You will encounter no "Keep Out" signs on the Forests. They are not fenced against the public, but invite your presence and use. The only signs you will find are those which point you on your way or ask your cooperation in preserving the beauty and value of these free recreation grounds and their resources. Firearms are not barred, and hunting and fishing are restricted only by the requirements of the State game laws.

You are welcome to all the necessary firewood, and to forage for saddle and pack animals. So far as is possible, the grazing of commercial stock is regulated in such a way as to save an accessible supply of forage for the camper's use. You may camp where you like and stay as long as you please. The Forest Service asks only that you look to the proper sanitation of the camp and that at all times you be careful with fire.

Whether you wish to stay only a short time in the Forest or to make your permanent summer home there, you will find that the Forest Service has made every provision within its means for your convenience. Roads and trails make hunting, fishing, and camping grounds easily accessible. Guideposts are being set up as rapidly as possible. Forest camps, equipped with stone fireplaces and other conveniences, are laid off in many of the main-traveled portions of the Forests for the use of visitors. The extensive telephone system maintained on the Forests in connection with their protection from fire is at the service of visitors in case of emergency. Registers are kept at forest camps in which the visitor may write his name and probable route of travel, thus making it possible for a forest officer to find him in the event of need.

Maps and detailed information on any particular National Forest may be had on application to the district forester at Portland or to the supervisor of the Forest concerned. The forest rangers are always willing to direct travelers and to give any other assistance that they can without neglecting their more important duties.

If you wish to build a permanent summer home, you may lease a site for a term of years at a reasonable annual rental. It may be a cabin, cottage, or something more

pretentious, as you wish. A permit to occupy such a site may cost as little as \$5 a year, and seldom costs more than \$25. The only restrictions are that the building must be sightly and that the grounds must be kept in a neat and sanitary condition.

The recreational advantages of the National Forests in Oregon are being more largely used as new roads and trails constructed by the Forest Service make them more accessible and as the public comes to know the opportunities they afford for health, rest, and sport. During 1922 about 457,706 people visited the National Forests of Oregon. The presence of visitors naturally increases the danger of fire in the Forests—a constant menace even under the most favorable conditions. Destruction of the Oregon Forests by fire or any other agency would mean an irreparable loss to the entire State. Those who wish to go into the National Forests are urgently requested to read the suggestions on page 44 in regard to simple ways of preventing forest fires.

FOREST OFFICERS COOPERATE.

The Forest Service and forest officers work in cooperation with many other bureaus of the United States Department of Agriculture as well as with many State departments of Oregon and Washington. The Forest Service cooperates closely with the Bureau of Public Roads in forest highway work, the bureau being responsible for the technical details of highway location, survey, and construction. The Service cooperates with the Biological Survey in the work of ridding the forest ranges of predatory animals, such as wolves, coyotes, bobcats, and cougars. It cooperates with the Bureau of Animal Industry in keeping the forest ranges free from stock diseases. It cooperates with the Bureau of Plant Industry in studying tree diseases, such as white-pine blister rust and fungous diseases of various kinds. It works with the Bureau of Entomology in combating the ravages of forest insects, such as the pine-beetle work in southern Oregon. The Service also cooperates with the Weather Bureau in maintaining many weather stations in various portions of the National Forests.

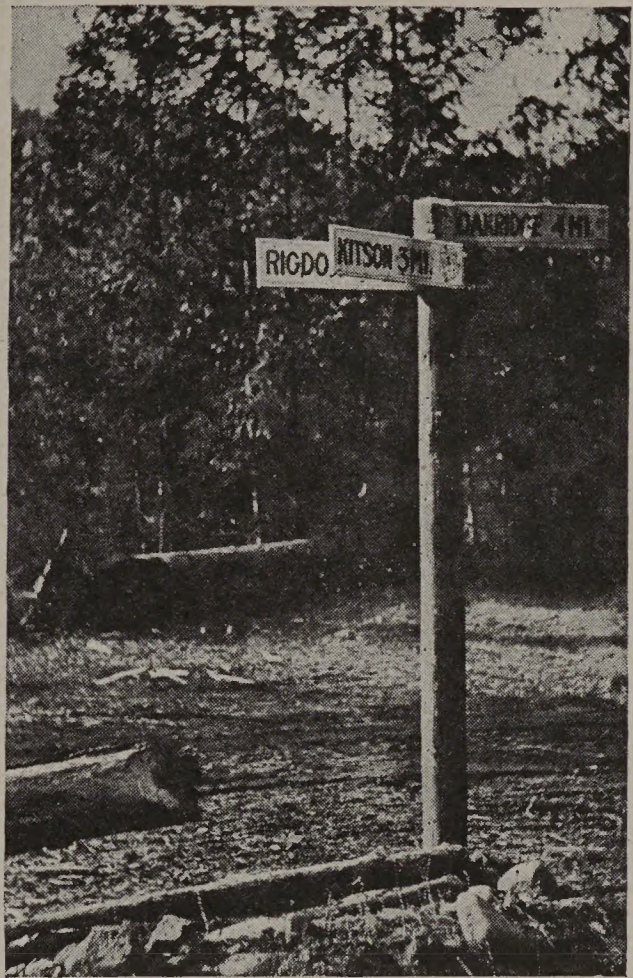
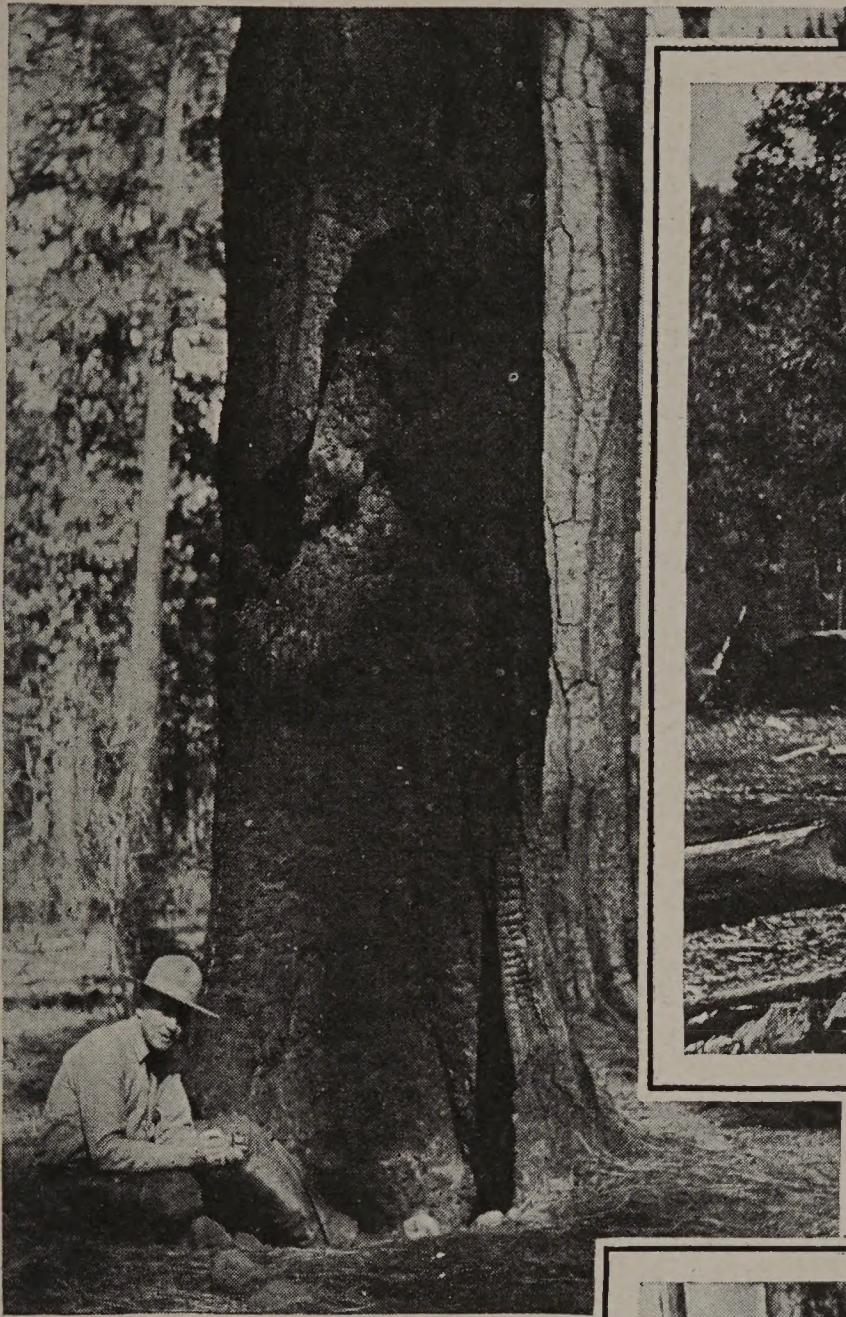
Forest officers cooperate with the State Game Commissions of Oregon and Washington. All field forest officers of these two States are deputy State game wardens. They cooperate also in the work of stocking the streams and lakes of the National Forests with fish, each year taking fry back into the mountains and placing them in unstocked waters. All forest supervisors of these two States are deputy State health officers, as they are keenly interested in public health and sanitation on the National Forests. The Forest Service also cooperates actively with the State foresters of Oregon and Washington in matters of forestry, and especially in forest protection. They also cooperate with the State Highway Commissions in matters of State highways crossing National Forest lands.

CONDITIONS IN THE OREGON NATIONAL FORESTS.

The National Forests in Oregon include the State's higher mountain areas. The backbone of the Cascade Range, from Mount Hood south to California, and its higher timbered slopes are comprised in six National Forests of about 1,000,000 acres each. In the Coast Range are two other Forests, with a combined area of about 1,500,000 acres, while in the Willowa and Blue Mountains are six more, totaling some 5,500,000 acres. All told, Oregon has more than 13,000,000 acres of National Forest land set aside to meet future demands for timber, to protect water resources, and to furnish a place for recreation.

It is Oregon's distinction that within her borders is more standing timber than in any other State. It amounts to nearly one-fifth of the country's total supply, and about one-third of it is in the National Forests.

On the west slope of the Cascades the climate is mild and the rainfall exceptionally heavy. Here, especially at the lower elevations, are some of the finest stands of timber in the world, made up of such species as Douglas fir, western hemlock, and

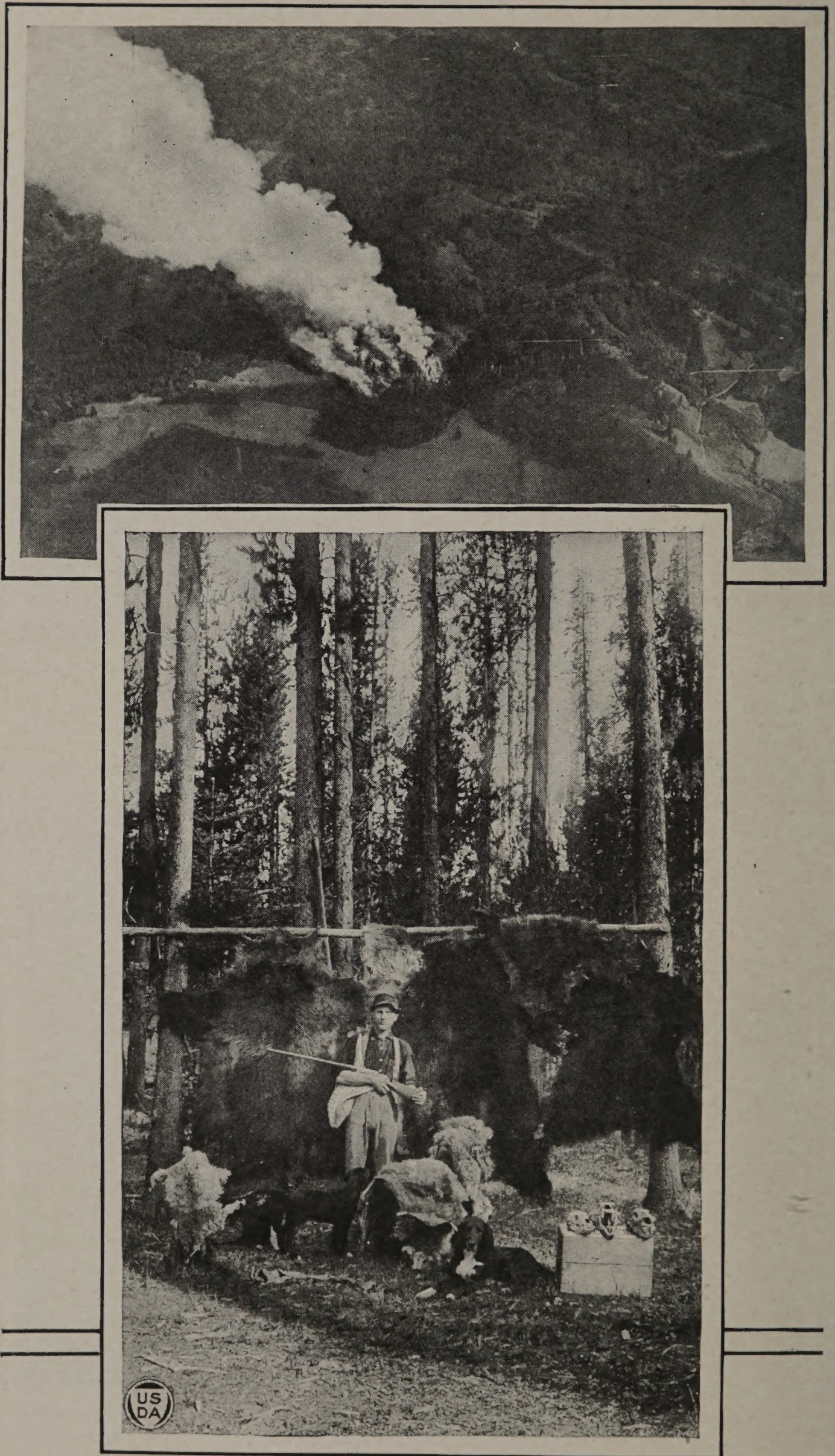


What "light burning" does to the large timber, if continued.

Signboards to assist the traveler—put up by the forest rangers—in the Cascade Forest.

A pack train on the Cascade Forest, for taking supplies to the scene of forest fires back in the mountains.

Rhododendron, the typical flowering shrub of the Oregon Cascades.



A forest fire from an airplane.

Bear, bobcats, wolves, and coyotes are found on many of the Oregon National Forests. The work of extermination of these predatory animals is in charge of the U. S. Biological Survey, which employs a force of hunters.

western cedar. These trees are also characteristic of the two National Forests in the Coast Range, where the vegetation is of almost tropical luxuriance. At the higher elevations the Cascades are in many places exceedingly rough and rugged, with a rather sparse growth of inferior timber.

On the east slope of the Cascades and in the Willowa and Blue Mountains the climate is much drier and the summers shorter. In consequence, the timber is more open, and western yellow pine replaces Douglas fir as the chief commercial tree.

LIVESTOCK AND SCENERY.

If you go into the higher portions of the mountains of Oregon during the summer months you will likely see some sheep and cattle using the grass and forage plants. It is well to know in advance that this livestock is there under permit from the Forest Service, and is allowed in order to utilize the annual growth of forage which would otherwise go to waste. Moreover, if this annual plant growth were not utilized, it would constitute a very real fire menace to the surrounding forest. This livestock is Oregon-owned and helps to feed and clothe many of the State's citizens by furnishing beef, mutton, and wool, all important Oregon products. The National Forests may be enjoyed for camping and recreation at any time and almost everywhere, but these mountain ranges are serving also a very real economic purpose by furnishing summer pasture for many thousands of sheep and cattle. The Forest Service is interested in preserving Oregon's wealth of mountain plant life, but it is also interested in the proper and careful utilization of her natural resources to the end that these resources may always be here to be used and enjoyed.

INDIVIDUAL NATIONAL FORESTS.

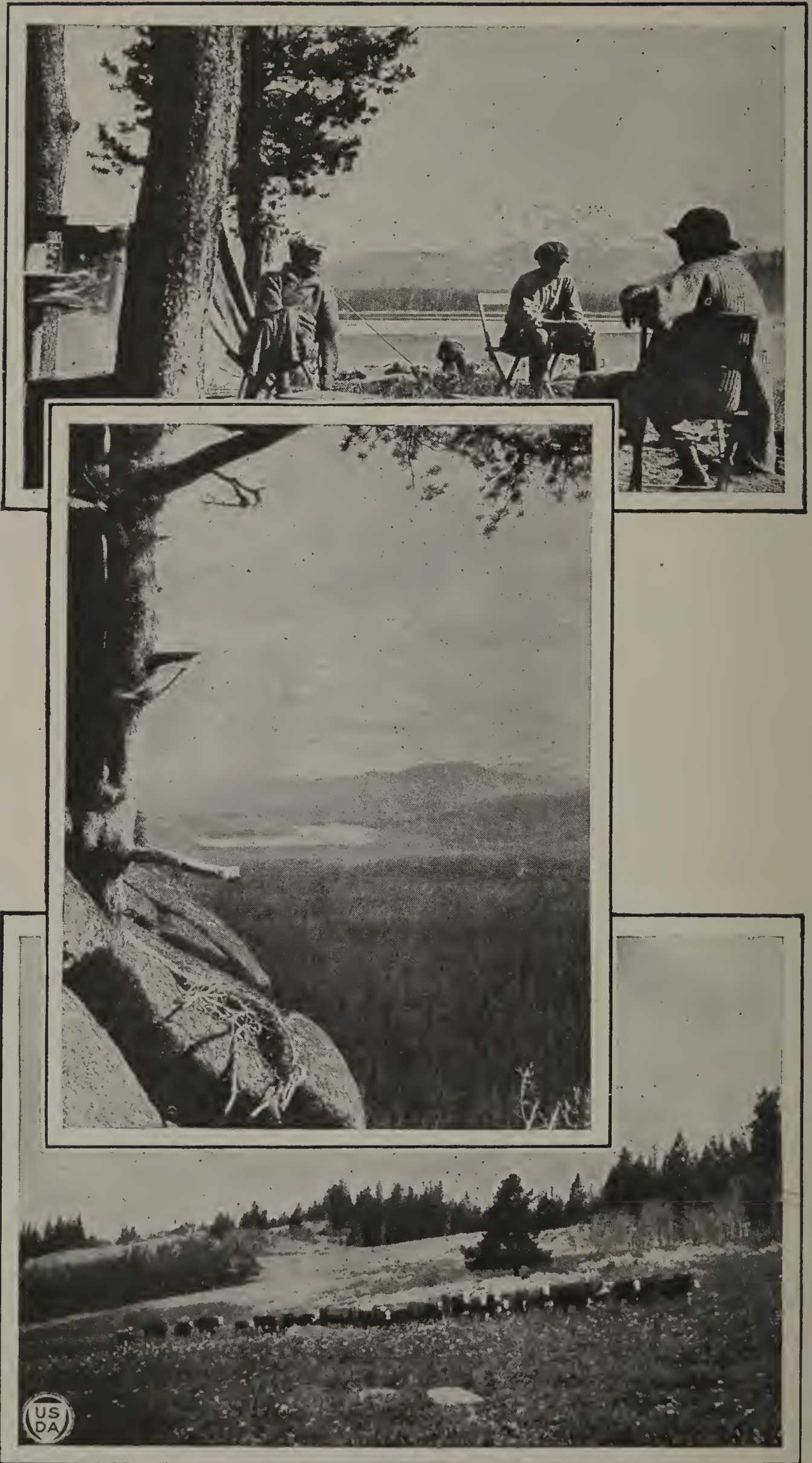
Following is a brief description of each of the National Forests in Oregon. For their location, see map facing page 56. For more specific information or for larger and more detailed maps, address the forest supervisor at the address given on page 2.

CASCADE NATIONAL FOREST.

The Cascade National Forest has an area of 1,091,113 acres, lying wholly within Lane County. It is bounded on the east by the summit of the Cascade Mountains and extends north and south along their west slope for a distance of 70 miles. On the south it is bounded by the Calapooya Mountains, which connect the Cascade Range and separate the Umpqua and Willamette watersheds. The area includes the upper drainage basins of the Willamette and McKenzie Rivers.

The numerous lakes and streams within the Forest, restocked frequently, make it a paradise for the angler. Many lakes and streams which but a few years ago were practically depleted are now teeming with millions of fish. For those in search of game there are black-tailed deer and brown bear in abundance. More wary and difficult to find, but present none the less, are wildcats, wolves, and mountain lions.

The Cascade Range on the east rises in abrupt elevations to form some of the most noted and beautiful landmarks in the country. Among these are Cow Horn Mountain, 7,666 feet; Diamond Peak, 8,792 feet; Maiden Peak, 7,750 feet; and in the north end of the Forest, the famous Three Sisters. These three well-known peaks rise majestically to a height of more than 10,000 feet, and are resplendent the year round in jeweled settings of perpetual snow. The snow which falls in the higher regions each winter gradually melts during the summer and feeds the many scenic waterfalls and cascades from which the Forest derives its name. Most noted among these are, perhaps, Salt Creek Falls, with its perpendicular drop of over 275 feet, and McKenzie Falls, both of which are visited annually by many tourists.



"Far from the madding crowd," an Oregon scene.
One of a thousand views of the high Cascades of Oregon.
Rounding up a bunch of stock cattle.

The south end of the Forest is reached by a branch line of the Southern Pacific Railroad, which runs from Eugene to Oakridge. The extension of this railroad across the Cascade Range into eastern Oregon to connect with the Klamath Falls is now under way. From Oakridge the old Oregon Central Military Road follows the Middle Fork of the Willamette and crosses over the summit into eastern Oregon at Summit Lake at an elevation of 5,600 feet.

Oakridge, 48.5 miles from Eugene, is the outfitting point for tourists who visit this end of the Forest. Hotel, garage, and livery accommodations may be obtained there. Professional guides and packers are also available. Two and one-half miles from Oakridge up Salmon Creek (51 miles from Eugene) the Forest Service has laid out a tract of 20 lots for summer homes, which may be leased at an annual rental of \$10 to \$15. These lots front on Salmon Creek, the rushing rapids and placid pools of which, shaded by the graceful lacing of intertwined alder, maple, and evergreen trees, furnish pleasant places for fishing and swimming. The reopening of the Willamette Military Highway across the Cascade Summit in 1921 offers the automobile tourist an opportunity to make a circuit through and near the Cascade and Deschutes National Forests as well as to reach Odell and Crescent Lakes. The circuit is made from Eugene via the Willamette Highway southeast to Crescent (hotels, stores, post office, and garages) on the Dalles-California Highway, then north to Bend, Oreg., and west via the McKenzie Highway to Eugene. The round trip is about 250 miles and can be made comfortably in three days.

All points of interest in this region are less than two days by trail from Oakridge. Waldo Lake, Odell Lake, and the Huckleberry Patch are all favorite camping places. Horse feed is abundant at Odell Lake, but campers at Waldo Lake should either carry the feed or arrange to take their stock to the Huckleberry Patch in Taylor Burn, 4 miles north of Waldo Lake. At this place the Forest Service has set aside an area for the use of campers. Many parties from both sides of the Cascades pick huckleberries here during September of each year. Kitson Springs, located 4 miles up Kitson Creek from the Military Road and 8 miles from Oakridge, is accessible by automobile, and has a summer hotel. By turning off the Military Road, 2 miles from Oakridge, one may reach Winona or McCredie Hot Springs, about 11 miles from Oakridge. These springs also are accessible by automobile. Here in the beautiful Salt Creek country there are camping facilities and a summer hotel, the last hotel accommodations to be found in the Forest on the trail to Salt Creek Falls. At the head of Salt Creek, Gold Lake, 18 miles from McCredie Hot Springs, tempts the fisherman.

The north end of the Forest is reached by the McKenzie Road. This route is passable by automobile to McKenzie Bridge a larger part of the year, but during the winter months the McKenzie Pass into eastern Oregon is blocked by snow. The entire route is a good automobile road at present, and passes through a section rich in natural beauty and scenic wonders.

McKenzie Bridge, located on the McKenzie River 56 miles from Eugene, is a mecca for tourists and the outfitting point for campers and hunters in the north end of the Forest. It has a tourist hotel, post office, and store, and is the headquarters of professional guides. On the transmountain automobile road, 1 mile from McKenzie Bridge post office, or 57 miles from Eugene, the Forest Service has set aside a very attractive summer home-site tract including 28 building lots, for which the annual rental charge is from \$10 to \$15 per lot. Foley Hot Springs and Belknap Hot Springs, located short distances from McKenzie Bridge, are both popular summer resorts. The water at both places contains mineral and is said to be medicinal.

Good fishing is to be had in Horse Lakes and the many McKenzie tributaries. Good hunting and abundant horse feed are found in the north end of the Forest, and a day's journey by trail from McKenzie Bridge will bring one to most of the points of interest.

The Forest is covered with a dense stand of Douglas fir estimated to contain 24,000,000,000 board feet of merchantable timber. The task of protecting this immensely valuable body of timber from fire during the dry season is a large one; and tourists, campers, and other users of the Forest can render great assistance in this undertaking by exercising extreme care in the handling of fire. In the Forest are over 500 miles of Government-built telephone lines, which make it a comparatively easy matter for campers and tourists to notify forest officers in case of fire.

The supervisor has headquarters at Eugene, and district rangers are located at McKenzie Bridge, Oakridge, Flat Creek ranger station, and West Boundary ranger station.

CRATER NATIONAL FOREST.

The Crater National Forest is in two principal separate tracts, aggregating 793,588 acres. The larger includes the southern slope of the Umpqua Range and the southern end of the Cascade Range; the other is in the Siskiyou Mountains. The Crater Forest is the southern end of the Oregon Skyline Trail. Most of the Forest is in Jackson and Klamath Counties, Oreg., but there are small portions in Douglas and Josephine Counties, and the Siskiyou portion extends into Siskiyou County, Calif. The Cascade portion is a broad, timbered plateau region, broken by many buttes, peaks, and canyons; the Siskiyou part is still more broken, with steep, narrow ridges, abrupt peaks, and deep canyons. Mount McLoughlin, a symmetrical pyramidal peak over 9,000 feet in elevation, has snow on its northern face the year round. Aspen Butte and Mount Thielsen are over 8,000 feet high, and several others, including Mount Ashland and Wagner Butte, are between 7,000 and 8,000 feet in elevation.

The east slope of the Cascade portion is drained by several relatively short and turbulent streams to Klamath Lake and Klamath River; most of the west slope is drained by Rogue River and its tributaries; and the Siskiyou portion comprises the upper water shed of Ashland Creek and Applegate River. Most of the streams flow through narrow canyons. There are benches, valleys, and broad ridges that can be traveled long distances without any steep grades.

The traveler through the Crater Forest will meet five forest species—yellow pine, lodgepole pine, Douglas fir, white and subalpine fir. Below 5,000 feet on the east side the yellow pine predominates. Douglas fir, white fir, and other species blend with the yellow pine. The lodgepole pine forest lies at high elevations and is in places an almost impenetrable thicket of poles.

Feed for saddle and pack horses is fairly abundant but scattered. Most of the grass is located in natural meadows and glades and small openings in the timber. In the heavy fir forests, at medium elevations, there is no forage early in the season. There is more or less fishing in nearly all the streams. Some of the lakes are locally famous for fishing. Others have recently been stocked, and some are as yet devoid of fish. Deer hunting is fairly good. In the high mountains the natural scenery of peaks, lakes, rivers, and forest is beautiful and sometimes impressively grand.

Of the many attractive trips that may be made by touring car one of the best is to Crater Lake in the Crater Lake National Park. Crater Lake is the deepest body of fresh water in America, and, because of its deep-blue color and the grandeur of the encircling cliffs, is one of the most beautiful spots on the continent. While not within National Forest boundaries, it is surrounded by the Forests on three sides and is best reached by a picturesque mountain road which runs for much of its length through the Crater National Forest. On this road is the Natural Bridge of Rogue River. If the starting point is Medford, one can travel via Trail or Eagle Point up the Rogue River, through a region of diversified scenery. The total distance is 80 miles. There are hotels at Eagle Point, 12 miles from Medford; at Trail, 24 miles; and at Prospect, 47 miles. Prospect is the usual halfway point where automobile tourists

stop for dinner. Supplies, gasoline, and grain may be purchased also at Union Creek. Here the Forest Service has set apart the Union Creek forest camp and summer home-site tract of 35 building lots. The trip may be broken, if desired, by camping at a number of convenient camping places in the National Forest, such as Natural Bridge, Union Creek, Silver Creek, and Whiskey Creek. One enters the Crater National Forest through a rustic portal about 5 miles above Prospect and travels through a dense forest of tall Douglas fir, yellow pine, and sugar pine. Signboards have been placed along the road by the Forest Service, calling attention to number of natural features of interest. Among these are the Natural Bridge of lava rock, under which Rogue River plunges, and the Rogue River Gorge just above Union Creek, where the river roars through a box canyon with perpendicular rock sides.

From Crater Lake one may go out on the east side of the Cascades, north to Diamond Lake, Bend, and The Dalles, or south via Fort Klamath, to Klamath Falls and California. The road through the National Park and the Crater National Forest follows the course of Anna Creek, which flows through a narrow canyon with precipitous slopes. The road at points approaches so close to the edge of the canyon that one can, without leaving the car, look down to the river below and get glimpses of the fantastic pinnacles standing straight and tall on the precipitous slopes of the gorge.

Traveling southward from Fort Klamath to Klamath Falls, one has a choice of several routes. A road passes on the east side of the Klamath Lake through the Klamath Indian Reservation; another road passes again through the Crater National Forest a distance of approximately 30 miles; or one may take the mail launch at any one of a number of points. The route on the west side of the lake through the Crater National Forest is very attractive, and there are a number of features of especial interest to the tourist or campers.

Camping sites where grass is plentiful are abundant. The road passes within a few hundred feet of Recreation Creek along its entire course. This well-named creek flows into the north end of Pelican Bay. At this point the Forest Service has set aside the Recreation Creek summer home-site area with 43 lots, and Odessa Creek with 9 lots. Five miles south of Pelican Bay is the Odessa home-site tract of lots. Plenty of camping sites have been reserved on Recreation Creek and at Odessa for the use of transients.

At Rocky Point, at the mouth of Recreation Creek, there is a post office called Recreation, with daily mail service except in the winter, when one may take the mail launch to Klamath Falls. There is a hotel at Harriman Lodge, about 2 miles south of Pelican Bay, and another comfortable hotel at Eagle Ridge, reached by mail launch. Duck shooting is excellent on the lake and in the marsh in season. Rainbow trout and lake trout weighing 10 pounds and over are often caught. Mosquitoes are troublesome early in the season but usually disappear early in August.

Another trip of a different character is from Jacksonville up the Applegate River. Though there are sharp turns and sudden, short, steep grades, cars of light weight can travel as far as Copper post office. This road is in good condition during most of the year.

When traveling by wagon or pack train, less frequented places can be easily reached. A favorite short trip is that from Ashland up Mount Ashland, 7,662 feet in altitude, from which a magnificent view of Rogue River Valleys, Shasta Valley, the Cascade Range, and the Siskiyou Mountains is obtainable. The distance is about 12 miles and can be made on horseback.

For those who desire a more strenuous mountain climb, Mount McLoughlin and Mount Thielsen offer excitement. Both of these mountains are very steep and rocky. Mount Thielsen can be reached from a camp on Diamond Lake. Mount McLoughlin may be climbed from either one of two approaches, from Fish Lake or Fourmile Lake. The Forest Service has built a lookout house on Mount McLoughlin for fire protection purposes which is connected by telephone with ranger headquarters.

From Butte Falls several roads radiate into the Forest, making accessible points of interest to the camper or sportsman. Fishing is good in the South Fork of Rogue River, which is reached by an 18-mile trip by wagon road passable for automobiles. It is about the same distance by road to the headwaters of Rancheria Creek, where deer are fairly plentiful and where there are a number of good trout streams.

The city of Medford obtains its water from Little Butte Creek, which rises in Fish Lake. For the protection of the purity of the drinking water, camping is not permitted near these waters.

Dead Indian Soda Springs is reached from Medford over the Brownsboro Road to Lake Creek post office, thence by the way of the new Forest Service road up the South Fork of Little Butte Creek, a total distance of 37 miles.

Close to the Dead Indian Soda Springs there is a forest camp and summer home-site area of 13 lots, which are rented at \$7.50 each per annum.

The Dead Indian country is best reached from Ashland by the Dead Indian Road. The Lake of the Woods is a very beautiful little lake and is a popular camping ground, especially when the crop of mountain huckleberries is good. There is good horse feed at both ends of the lake and excellent spring water at the public camp grounds. A community of summer homes is growing up under permit of the Forest Service, and this bids fair to become one of the most popular outing places in southern Oregon. There are 140 lots surveyed along the lake shore which, with one exception, have 100 feet frontage and 200 to 260 feet depth and rent for \$5 per annum.

Another even more famous huckleberry ground is on Huckleberry Mountain. This is a large flat-topped mountain on which huckleberries are especially plentiful. The camp grounds are reached by trail from the east, via Sevenmile Creek, or from the west via a trail branching off the Rogue River Road. In seasons of plentiful crops of huckleberries the camp grounds may have a shifting population of between 1,000 and 3,000 campers. For this reason the camp ground is called "Huckleberry City."

One of the most picturesque regions on the Crater Forest is Blue Canyon, north of Mount McLoughlin. This is a box-walled valley with level floor on the summit of the Cascade Range Plateau. It contains a number of small lakes in tall subalpine timber, through which travel is comparatively easy. Fishing and deer hunting are good in Blue Canyon, especially because it is so remote that it is not often visited by sportsmen. It is accessible by trail either from the east or west.

Automobiles may be hired at Medford, Ashland, and Klamath Falls for trips of any length. Special rates are made for long trips or large parties. Teams and wagons and saddle horses can also be hired in these and other towns, but pack outfits are sometimes hard to rent. Ranchers and stockmen are the likeliest people from whom they may be procured, but such outfits are generally in use in August and September; moreover, there are not many persons who own more than they use themselves. There are stage routes—automobile or wagon—which take passengers to points within or near the Crater National Forest.

There is daily passenger, freight, and mail service by gasoline launch between Klamath Falls and points on Klamath Lake.

The supervisor has headquarters in Medford, and district rangers are located at Butte Falls, Oreg., and at Union Creek, Big Elk, Star, Odessa, Sevenmile, and Trail ranger.

DESCHUTES NATIONAL FOREST.

The Deschutes National Forest comprises 1,463,840 acres, located on the eastern slopes of the Cascade Range in central Oregon. It includes the high mountainous country and the high timbered plateau surrounding the headwaters of the Deschutes River and, in a separate block, the Paulina Mountains.

The Forest is visited by increasing numbers each year for hunting, camping, and fishing. Along the Cascade Range are several high and attractive snow-capped



Where boys grow strong and self-reliant.

Bitterroot—Found on rocky dry sites in the mountains at elevations of 3,000 to 5,000 feet.

Mother and the kids try their hands on the Metolius.

peaks, a large number of mountain lakes, splendid fishing and camping grounds, excellent duck hunting, and many other features of interest. A widely extended system of roads renders many of these places easily accessible by automobile from points in the Deschutes Valley and from the Willamette Valley via the McKenzie and old Willamette roads, which connect Eugene, on the main line of the Southern Pacific Railroad, with Bend and other towns just outside the Forest east of the Cascade Range. Trails lead from these roads into some of the more inaccessible districts. Signboards along the roads and trails indicate the distance and direction to various points.

Hotel accommodations are obtainable at all towns near the Forest. Accommodations for travelers are also to be had at a number of other places, including the Metolius River Valley, East Lake, Crescent Lake, and Odell Lake. Horse feed is plentiful at most of the lakes and at many places along the streams.

Among the points of especial interest are the following:

Metolius River country, a region created, it would seem, for the special benefit of the lovers of outdoors, may be reached by excellent automobile road 14 miles from Sisters. Along the river may be found good horse feed, camping grounds, and excellent trout fishing. The Forest Service has set aside several groups of forest camps and summer home sites among the pines along the Metolius. As a beginning 25 lots have been surveyed and posted. About half of these lots are already occupied. Those not occupied may be leased at from \$8 to \$15 per annum. These sites are about 15 miles from Sisters and 40 miles from Bend by excellent automobile road.

The Metolius River has its visible source about 2 miles above the home-site area, and springs full fledged from the earth, coming forth from what underground caverns no one knows. The river is a veritable fisherman's paradise.

A huckleberry patch near Cabot Lodge, 7 miles from the river, may be reached by trail which continues to the foot of Mount Jefferson, an unusually symmetrical, snowcapped peak 10,522 feet high located at the extreme northwest corner of the Forest.

Suttle Lake, 4 miles from the Metolius Valley or 15 miles from Sisters, can be reached by automobile and offers good fishing grounds and an excellent bathing beach. A small resort providing hotel accommodations and boats is located at Suttle Lake.

Blue Lake, a water-filled volcanic crater of more than usual interest, can be reached by road in a short drive from Suttle Lake.

A good trail leads 4½-miles from the Metolius Valley road to the summit of Black Butte, a Forest Service lookout station, from which one of the best views in the entire region may be obtained.

The McKenzie Highway, which crosses the Cascades at an elevation of 5,200 feet, connects Eugene and Sisters, and is a good automobile road. The rough, barren lava fields at the summit, about 3 miles wide, are of unusual interest.

The Century Drive is a new road recently constructed by the Forest Service, which opens up some exceptionally beautiful mountain country. The road leaves Bend on the west side of the Deschutes River, crossing at an elevation of 6,500 feet the base of Bachelor Mountain, a snowcapped peak, thence on to Lost Lake, a distance of 25 miles. From here the road leads to Sparks Lake, which affords unusual camping opportunities. Soda Springs may be reached by a 2½-mile trip over a good trail. The three Green Lakes are located between the South Sister and Broken Top Mountains. These vivid-green emeralds with their wonderful setting are well worth the 6-mile hike from Sparks Lake. For those who enjoy strenuous mountain climbing, the South Sister and Broken Top Mountains offer a compensating reward. The South Sister is 10,351 feet in elevation, and Broken Top 9,103. On leaving Sparks Lake the road passes by some rocks on the shore of Devil's Lake, where the Indians of earlier generations have left their markings. The road continues on to Elk Lake,

one of the most beautiful lakes in the Cascade Mountains, which is full of eastern brook trout. Summer home sites may be rented at Elk Lake for \$8 to \$15. Thence the road leads on past the Lava Lakes, Crane Prairie, Fall River, and back to Bend, a trip of about 90 miles. Fall River gushes from the earth in a huge spring similar to the Metolius and Spring Rivers. Telephones are located at Elk Lake, Little Lava Lake, Crane Prairie, and on the summit of Bachelor Mountain, which is a commanding lookout point.

Davis Lake, Odell Lake, and Crescent Lake, three beautiful lakes lying near the Cascade summit and all excellent fishing and camping localities, can be reached by good automobile roads via Crescent. A new road is being built which connects the Century Drive and Davis and Odell Lakes. Horse feed can be secured at Davis Lake and at the west end of Crescent Lake. Forest Service telephones are located at Davis, Odell, Crescent Lakes, and Maiden Peak. Maiden Peak, a Forest Service lookout station, situated on the Cascade summit, can be reached by trail 6 miles from Davis Lake.

Paulina and East Lakes are located 45 miles from Bend, on the very summit of the Paulina Mountains, an isolated range east of the Cascades. They can be reached by automobile over the China Hat Road or from the Dalles-California Highway at Paulina Creek. There are mineral springs at both lakes. An attractive area for summer home sites has been laid out along the shores of East Lake, and the 22 lots which have been surveyed on the area may be leased at \$10 to \$15 per annum.

A small summer resort is located at the hot springs at East Lake, and good fishing may be found at the lake. This region is of unusual geological interest, the lakes being located in an immense crater, surrounding which is a rim rising in some places nearly 2,000 feet above the lake level. Its highest peak is Paulina Peak, another Forest Service lookout station, 2 miles by trail from Paulina Lake. This peak is about 8,475 feet in elevation.

The Paulina Mountain region is in a detached portion of the Deschutes National Forest and is practically all within the Deschutes Game Refuge created by the State of Oregon. Game birds and animals are protected, but the angler is welcome. Bear hunting is good, and the bears are not protected.

There are several ice caves on or near the Forest. Among these are the Arnold Ice Cave, 16 miles southeast of Bend; the South Ice Cave, 18 miles north of Fort Rock; the Edison Ice Cave, 8½ miles northwest of the Big River ranger station. All are accessible by automobile. The Lava River Cave is 14 miles from Bend, Oreg., on the Dalles-California Highway.

In the region are many extinct volcanic craters, one of the most easily accessible and most interesting of which is Lava Butte. That is just outside the Forest, about 10 miles south of Bend and one-quarter mile from the road. At its summit is a crater having an unbroken rim.

The supervisor has headquarters at Bend, and district rangers are located at Sisters, LaPine, Fort Rock, and Crescent.

FREMONT NATIONAL FOREST.

The Fremont National Forest (856,369 acres) is located in the counties of Lake and Klamath in south-central Oregon, and includes the headwaters of Williamson, Sprague, Sycan, and Chewaucan Rivers. The Sycan flows into the Sprague, and the Sprague into the Williamson, which in turn flows into the upper Klamath Lake. The Chewaucan empties into Lake Abert. The Forest is very important from the point of view of livestock raising, furnishing range for many thousand head of sheep and cattle.

The Fremont Forest and vicinity furnish a variety of game and fish. Mule deer are plentiful, but hard to secure. Antelope are still found in the "desert" east of the Forest, but seldom venture into the timber. Various kinds of ducks and geese

are found in abundance on the lakes and streams. This section of Oregon is a veritable duck-hunter's paradise. Grouse are plentiful in the timber. Sage hens are found by thousands on the sagebrush plains to the east. They are also found within the Forest, but in much smaller numbers. The small streams throughout the Forest are well stocked with various kinds of small trout, and the larger streams and lakes furnish the larger varieties of trout and so-called land-locked salmon.

The Fremont National Forest and Lakeview may be reached from the north by rail to Bend, Oreg., and thence by automobile stage to Silver Lake, Paisley, and Lakeview; from the south by rail direct to Lakeview over the Nevada-California-Oregon Railway from Hackstaff or Wendel, Calif.; and from the west by automobile stage via Bly, Oreg., from Klamath Falls.

Garage service may be obtained at Silver Lake, Paisley, and Lakeview. The roads of Lake County are very good during the summer and fall for automobile travel and the new highway now under construction makes it possible to reach Lakeview from Bend in one day. The interior of the Forest, except the most remote parts, can now be reached by automobile; and those desiring to come by rail to Bend, Klamath Falls, or Lakeview can hire machines, with or without drivers, to take them to desirable camp grounds. If the more remote portions of the Forest are to be reached, horses and rigs may be secured at any of the above-named places at reasonable rates.

Some of the camp grounds which may be reached by automobile from Silver Lake are Williamson River, Klamath Marsh, Silver Creek, and Buck Creek. The road from Fort Klamath via Sand Creek, Klamath Marsh, and Antelope Flat to Silver Lake is open to automobile travel during the summer and fall.

Traveling south from Silver Lake over the highway, one passes the famous Ana River, Summer Lake, and the Chewaucan River and Marsh, all of which furnish most excellent duck shooting in season. The new Forest Service Road, now building through the Forest between Lakeview and Silver Lake, will provide a delightful drive through the timber for a distance of 100 miles, past beautiful camping places near which may be found an abundance of game and fish in season.

From Lakeview one may go by automobile to Dog Lake or Dairy Creek, both beautiful summer camping places in the midst of fine hunting and fishing territory. Sprague River, Deep Creek, Cottonwood, Mud Creek, and Drews Creek are among the best fishing streams of Lake County, and duck shooting may be found in abundance on Goose Lake, the Warner Lakes, and Lake Abert, all of which may be reached from Lakeview.

An unusual piece of work was started on the Fremont Forest in 1922. The western pine beetle, a small insect less than one-eighth of an inch in length, has in recent years killed millions of board feet of yellow pine on the Fremont Forest. To prevent the recurrence of these heavy depredations, the private owners and the Forest Service are cooperating in the execution of a permanent protection plan against the beetles. This plan includes all of the Fremont National Forest and the privately owned timber within and adjacent to its boundaries. During 1922, over \$14,000 was spent on control measures against destructive beetle outbreaks in watersheds of various tributaries of the Sprague River in the southern portion of the Fremont. In 1923 an equal amount was spent on the same work. The beetles concentrate in the trees which they completely girdle and kill. After the infested trees are killed, the bark is peeled from the main trunk and burned and thus the beetles are destroyed. Most of this work is done in the spring. Careful watch is being maintained over the beetle infestations in the various parts of the Forest. Dangerous outbreaks can, therefore, be discovered in their incipiency and checked before they do much destruction. The methods of controlling these attacks have been developed by the Federal Bureau of Entomology in cooperation with the Forest Service.

The supervisor has headquarters at Lakeview, and district rangers are located at Lakeview, Paisley, Dog Lake, and Silver Lake. Practically all parts of the Forest

are connected by the Forest Service system of telephones, which is available for use when necessary. Forest officers are always willing to assist travelers.

MALHEUR NATIONAL FOREST.

The Malheur National Forest, located in the Blue Mountains of eastern Oregon, has a total area of 1,057,682 acres. It is located in Grant, Harney, Baker, and Malheur Counties. It extends approximately 70 miles each way, north and south from the Umatilla County line to the northern edge of Harney Valley and east and west from the Malheur County line to within 12 or 15 miles of the Crook County line. For the most part the timber is open and free from underbrush. The Forest contains approximately 9,665,000,000 board feet of timber which will maintain a large lumbering operation indefinitely when it is cut and managed under forestry principles. Such an operation is now under construction which will mean the building of about 100 miles of railroad, which will open up not only the timber resources but the many thousands of acres of valley farming land in this part of the State. The Forest is also very important from the standpoint of furnishing forage for many sheep and cattle.

There are few parts of the Forest that can not be reached by team, wagon, or automobile. The streams and lakes afford splendid fishing. The mountains contain deer and several species of game birds. Bear, cougar, lynx, foxes, marten, beaver, and other fur-bearing animals are found.

The most desirable places for camping and recreation are the following:

Magoon Lake is located about 12 miles north of the town of John Day, and is accessible by a rough wagon road from that town. This road is passable by automobile to within 7 miles of the lake and to within 2 miles by road from Prairie City. The lake is about a mile long, half a mile wide, and in some places 300 feet deep. It lies in the bottom of what was at one time a very deep canyon and was formed by a landslide which dammed the canyon. It is one of the natural wonders of Oregon. The Forest Service, in cooperation with the State Fish and Game Commission, has planted several varieties of game trout in this lake, and in late years it has become a mecca for sportsmen from all over eastern Oregon. The hills about the lake are heavily timbered.

Strawberry Lake is a beautiful body of water located at the foot of Strawberry Mountain, which is one of the highest peaks in the Blue Mountains. The lake is accessible by team from Prairie City, 14 miles to the northeast. It covers about 45 acres and ranges in depth to 15 feet. Several varieties of trout have been planted in it. Strawberry Mountain, the summit of which is about 9,450 feet above sea level, is reached by trail from Strawberry Lake. The Forest Service maintains a fire lookout and telephone station here during the summer months. On a clear day it is possible with the aid of glasses, to see as far east as the Seven Devils in Idaho and as far west as the Cascade Range.

Logan Valley is just to the south of Strawberry Mountain. A good road leads into the valley from Prairie City by way of the Blue Mountain Hot Springs, a summer resort, thence over the summit of the Blue Mountains, across Summit Prairie, down Summit Creek and into the valley. It is an open mountain valley about 6 to 8 miles in size, entirely surrounded by heavily timbered hills and drained by four mountain streams, all of which converge at the lower end and form the Main Fork of the Malheur River. These streams abound in trout and greyling. At the northern end of the valley, just in the edge of the timber, is the Lake Creek ranger station, where a district ranger is located during the summer months.

Bear Creek, a stream which has its source well up in the Blue Mountains and flows through Bear Valley into the Silvies River, is, perhaps, one of the best trout streams. Along its upper portions are many camp sites. It is accessible from John Day by way of Canyon Creek and Bear Valley, or from Prairie City by way of the Blue Mountain Hot Springs and Logan Valley.

Murderers Creek is a good trout stream flowing through the Murderers Creek Canyon in a heavily timbered country and draining into the South Fork of the John Day River. Camping places are to be found along its entire length. It is accessible during the summer by automobile through Bear Valley. Along the lower breaks of this creek are some of the best winter deer ranges in Oregon. Hundreds of deer drift into them late in the fall and remain until spring.

John Day River is located partly inside the Forest. From Blue Mountain Hot Springs up to the summit of the Blue Mountains may be found many splendid camp sites. The several forks of the John Day River, including the north, middle, and south, furnish magnificent natural scenery. Fishing in all branches of the river is good.

Canyon Creek is the deepest gorge through the Blue Mountains and is, perhaps, the most popular mountain camping area. Canyon City, the county seat of Grant County, is located near the mouth of the canyon. The market road between the John Day and Harney Valleys extends through this canyon for about 11 miles, thence winds up over the mountain into Bear Valley and on to Burns, soon to be connected by railroad with the outside world. The main stream through the canyon and several of its larger branches furnish good fishing. Along the breaks of the canyon deer are plentiful, and it is a favorite fall hunting ground. A good automobile road extends the full length of the canyon and on down Silvies River. Telephone communication over Government and commercial lines is readily available from many ranches adjacent to all roads and from all towns.

The supervisor's headquarters is at John Day, and district rangers are located at Crane Prairie, Lake Creek, Crow Flat, Bear Valley, and Hyiu.

OCHOCO NATIONAL FOREST.

The Ochoco National Forest (825,643 gross acres) lies almost in the center of Oregon, in the counties of Crook, Wheeler, Harney, and Grant. It is reached by way of the two railroads up the Deschutes River to Prineville Junction, thence by City of Prineville Railway to Prineville, where the supervisor's office is located. From here stage lines lead out to nearly all parts of the Forest. The Forest may also be reached by way of Condon, Fossil, and Mitchell, via Prairie City, John Day, and Dayville, or via Burns.

The Forest is more or less open, and the slopes are so gradual that nearly every township can be reached with a mountain wagon. It possesses no natural features of particular interest, such as snow-capped peaks or high mountain lakes. The elevation ranges from 3,000 feet to 7,400 feet, Lookout, Snow, Spanish, and Pisgah Mountains being the highest points. The Forest is rich in timber resources, furnishes range for many thousand head of sheep and cattle, and is very important as being the watershed of streams used for extensive irrigation projects. There is always sufficient feed for camp horses along the streams until late fall.

Probably the most desirable camping place is on Deep Creek, which is about 5 miles east of Big Summit Prairie. This stream is about 25 miles from the Ochoco Highway, from which point there is a fairly good auto road to camping sites on the creek. Horse feed is also found here.

Emigrant Creek, in the extreme southeastern part of the Forest, is probably the best fishing stream. Deer hunting is also good in this vicinity. This portion of the Forest is more difficult to reach from the outside world, however, as it is about 100 miles from the nearest railroad point at present.

Some attractive camping or summer-home sites are to be found along Canyon Creek, about 30 miles east of Prineville, and only 3 or 4 miles off the Ochoco Highway. While the fishing is not so good in this stream, deer and grouse are fairly abundant, and the scenery is very attractive.



One of the pleasures of a camping trip in the National Forests.
Mazamas climbing Mount Hood in July.
Silhouettes.

The Ochoco Highway, connecting Prineville and Mitchell, is nearing completion and affords a number of excellent camp sites and is a real pleasure drive.

A road is also being extended up Mill Creek, a branch of Ochoco Creek, and already about 20 miles have been constructed. The canyon is now accessible to automobiles as far as Divide lookout station.

The supervisor's headquarters is at Prineville, and district rangers are located at Maury, Beaver, Ochoco Cabin, and Allison ranger stations, and at Paulina and Antone, Oreg.

MOUNT HOOD NATIONAL FOREST.

Both slopes of the Cascade Range from the Columbia River southward to the divide between the Clackamas and Santiam River basins are in the Mount Hood National Forest. Of special recreational interest are the Mount Hood region, Mount Jefferson, the Olallie Lakes along the summit of the Cascades north of Mount Jefferson, the upper waters of the Clackamas River, and the Columbia Gorge Park.

The Columbia Gorge Park is on the south bank of the Columbia River, 38 miles from Portland, and is traversed by the Columbia River Highway. It is also convenient to the Oregon-Washington Railroad & Navigation Co. and in the outing season has daily automobile stage service from Portland. It is 22 miles long and from 1 to 4 miles wide, and some of the best view points are near the highway. A complete scheme of development of the park for summer recreation purposes has been undertaken by the Forest Service. At Eagle Creek Forest Camp, 44 miles from Portland, picnic and camping grounds with many conveniences have been established. In 1923 about 35,000 pleasure seekers registered at these grounds, and it is estimated that altogether there were close to 250,000 summer visitors in that year. There are other good camping sites, and a system of trails is being developed. Excellent trails, from which the views are beautiful, run from the Highway at Multnomah Falls up Multnomah Creek to Larch Mountain, and from Bonneville to Wauna Point, and up Herman Creek to Indian Mountain and Chinidere Mountain. The Forest Service has built a trail up Eagle Creek connecting at Wahtum Lake with the Herman Creek trail, forming a 27-mile loop. In the summer of 1921 the Eagle Creek trail was extended from Wahtum Lake to Lost Lake. The distance from the Eagle Creek Camp Grounds to Lost Lake by this trail is 22 miles. At Wahtum Lake is located the permanent camp of the Portland Boy Scouts. A folder describing in detail the Mount Hood region, its trees, roads, trails, camping spots, and many trips, may be secured from the forest officers at Eagle Creek or at the forest supervisor's office in Portland.

Points at the base of Mount Hood (11,225 ft.) may be reached from Portland by automobile via Sandy and Rhododendron or through the Hood River Valley. One of the most important of the fire lookout stations of the Forest Service is located on the top of Mount Hood. There are many attractive camping places on its slopes. Lost Lake is famous for its great beauty and for the remarkable views of the mountain obtained from its shores. Many campers and fishermen visit it each year, and the recent improvement of the road from the town of Dee in the Hood River Valley has made it quite accessible. Mount Hood is climbed from the south, starting from Government Camp, which is reached in summer by automobile stage from Portland and from Boring on the electric line of the Portland Railway, Light & Power Co. Government Camp is also connected with the Deschutes River Valley via Wapinitia by a good road, much traveled in summer by wagons and automobiles. The starting point for making the ascent from the north is Cloud Cap Inn, 31 miles from Hood River. The Mount Hood region is rapidly becoming Portland's playground, and this recreational use will increase as the road and trail plans of the Forest Service make this region more accessible.



Sheep grazing on National Forest range.
A fire lookout and his little friend.
What the rangers dread—a forest fire.
A July day on Mount Hood,

An admirable camp site, commanding fine views of Mount Hood from an open meadow, is Elk Meadows on the Forest Service trail around the east side of Mount Hood. The trail is now the only method of getting to Elk Meadows, but the Mount Hood Loop road, to be completed in 1924, which will connect the roads of the upper Hood River Valley with the Barlow Road south of the mountain, will pass near the camp grounds.

The Bull Run division of the Mount Hood National Forest is the only part of the Forest which is not open to the public. This part of the Forest contains the watershed from which the city of Portland derives its water supply, and is closed to the public by act of Congress.

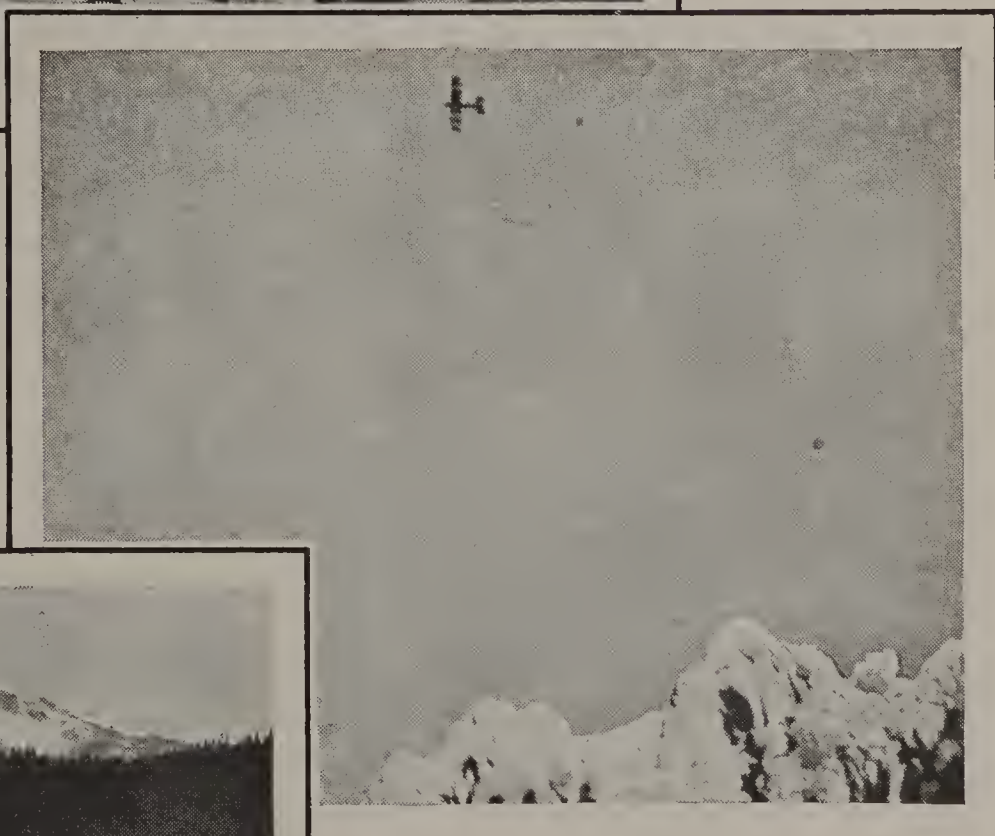
The upper waters of the Clackamas River consist of eight large branches, each of which has numerous tributaries. A comprehensive trail system covers this entire watershed and makes accessible many fine camp sites. The region is ideal for walking or pack trips. It is heavily timbered mountain country, intersected with picturesque streams, and affords good hunting and fishing. The Austin and Bagsby Springs, two medicinal hot springs, may be reached by trail from Estacada. These springs are distant two and three days' travel, respectively, from Portland.

A good trail, beginning at Dodge, a post office 9 miles north of Estacada, extends along the west boundary of this part of the Mount Hood National Forest and follows the high divide southward at Elk Lake and North Santiam River. The High Camp, Red House, and Skunk Cabbage Trails, which enter the Forest from towns along the Molalla, lead into this trail from the west. It passes through an area which is very rugged and scenically beautiful. One can go in a week of easy riding from Estacada by the Dodge Trail to Elk Lake and return down the Clackamas River. This trip takes in the high divide between the Clackamas and Molalla Rivers, Bagsby Hot Springs, and Battle Axe Mountain with its wonderful view of the Cascade Range panorama. Those who want to extend the trip and do not mind some rough traveling may branch off at Elk Lake, take the old Indian trail over the Scorpion Mountains to the summit of the Cascades, and return to Estacada by way of Clackamas Lake and Squaw Mountain.

The peculiar topographic formation and advantageous situation of Lookout Mountain make it especially important as a recreation ground. It is a long, narrow ridge, 4,600 feet high, from which a clear view may be obtained of Mount Hood and the whole Cascade Range to the west and of the plains of central Oregon and the Blue Mountains to the east. High Prairie on the north slope and near the summit, Brooks Meadow lower down and north of the mountain, and Badger Lake on the south are among the best camp sites. The Summit Trail along the top of the ridge between these points connects with the wagon road from Dufur. Brooks Meadow is reached by wagon road from The Dalles or by trail from the Hood River Valley.

From Olallie Butte 30 or more lakes are visible along the summit of the main Cascade Range, extending in a chain northward from Mount Jefferson toward Mount Hood. The climb to Olallie Butte gives a memorable view of the whole summit country. There are good camping sites at all of these lakes, and they may be reached by the main trail system southward from Mount Hood, or from Estacada by the Summit Trail by way of Squaw Mountain and Clackamas Lake, or by the trail up the Clackamas River from Estacada. Ten miles of forest road has already been built south towards Mount Jefferson from Clackamas Lake. A new railroad was begun in 1922 up the Clackamas which will make this region accessible to campers.

Near Rhododendron Inn, 40 miles from Portland on the automobile road to Mount Hood, the Forest Service has set apart the Zigzag Forest Camp and four areas for summer-residence sites. There are more than 300 building lots in these areas, with an average frontage of 130 feet on Zigzag River or on Still or Camp Creeks, which empty into the Zigzag. Already a thriving summer colony has sprung up in the region, 125 of these lots having been leased under permits costing \$10 a year. These



Orchards in the Hood River Valley made possible by water conserved in the Mount Hood National Forest.
 Cooking lunch at the Eagle Creek forest camp, along the Columbia River Highway.
 Air patrol plane over Mount Hood.
 The majesty of Mount Hood.



On Still Creek, Mount Hood Forest.
The patrolman ever on the lookout for forest fires.
One of the joys of camping.

lots lie among the soft greens and browns of the vine maple and fir woods. Easy access from Portland by automobile and great natural beauty make this section one of the most attractive mountain regions for summer camping and recreation.

The huckleberry patches in the Forest are much frequented by ranchers and their families. They are usually at high elevations. Notable ones are those on the south slope of Mount Hood, at Squaw Mountain east of Estacada, on Huckleberry Mountain south of Welches, and near Lost Lake. Mountain huckleberries are of large size and fine flavor. The Forest Service excludes sheep from the berry patches which are near popular summer resorts and camp grounds.

Most of the trips in the Mount Hood National Forest are long enough to require saddle and pack horses, and these may be obtained at Hood River, a convenient starting point for excursions into the Mount Hood and Olallie Lake regions. Another good outfitting point for the Olallie Lakes is Estacada. This is also the starting point for trips into the Clackamas River country. Columbia Gorge Park may be reached by motor from Portland. Horses can be obtained at Cascade Locks.

The Mount Hood National Forest, comprising 1,032,936 acres, has 1,160 miles of trails and roads, which give easy access to the more important points. Five hundred miles of telephone lines make communication possible to most parts of the Forest.

The headquarters of the supervisor is at 503 Post Office Building, Portland, Oreg. Information may be obtained on the ground from the forest rangers at Mount Hood post office, Cascade Locks, Welches, Estacada, Dufur, and Wapinitia, and at Eagle Creek Forest Camp during the summer months.

SANTIAM NATIONAL FOREST.

The Santiam National Forest is on the west slope of the Cascade Range, in Linn and Marion Counties, and occupies the mountainous region from Mount Jefferson and Mount Washington west to the Willamette Valley. This territory is drained principally by the Santiam River and its tributaries. The area is approximately 607,097 acres. For the most part it is well timbered.

The Forest is most easily accessible from three points—Detroit, Cascadia, and Sisters.

Detroit is near the eastern terminus of the Hoover branch of the Southern Pacific Company's lines, 55 miles east of Albany. Trains run from Albany to Detroit daily except Sunday. There is no wagon road into Detroit. The road ends at Niagara, about 13 miles from Detroit, but there is a good trail the rest of the way. At Detroit pack and saddle horses, guides, and packers are usually obtainable. Hotel accommodations and camping privileges can also be had. From this point as a base, good fishing is to be reached in the North Santiam River, which passes through the town, and in Breitenbush River, Tumble Creek, French Creek, Humbug Creek, and Boulder Creek, all of which are within from 2 to 6 miles of Detroit.

From Detroit there are two main routes of travel, one up the Breitenbush River and the other up the North Santiam River.

On the Breitenbush route are two good camping sites, Humbug Creek and the Breitenbush Hot Springs. Humbug Creek is in the dense timber 6 miles from Detroit by trail. The fishing is excellent. There is plenty of wood and water for camping purposes, but no horse feed.

The Breitenbush Hot Springs are 12 miles by trail from Detroit. These springs have been developed in a crude way. Several rude bathhouses, steam rooms, and bathing tanks have been constructed. Camping and bathing privileges can be had at moderate rates. There is no hotel, but several old cabins are available, and a tent restaurant is usually conducted during the summer months. There is fine fishing and hunting in this locality; also ample opportunity for mountain climbing.

Pamelia Lake is 18 miles by trail from Detroit, 12 of which is on the Minto Trail to Marion Lake and eastern Oregon. The lake is about 4,000 feet above sea level and is



One must see Clear Lake to realize its beauty. Santiam National Forest.
"The Petrified Gardens"—some of the odd formations in the Oregon Caves.

situated at the base of Mount Jefferson, which makes it a good starting point for the ascent. Mount Jefferson is 10,522 feet in elevation and has several glaciers and other scenic points of interest rivaling those of any other peak in Oregon. A summer home-site tract has been set aside at Pamela Lake. The fishing is excellent, and hunting and camping facilities are good.

Campers taking the North Santiam River route usually go to Pamela Lake or Marion Lake, though Jefferson Park and Hunts Cove. Three-fingered Jack might well be included, particularly by the mountain climber and lover of mountain scenery.

Jefferson Park, a comparatively level area of probably 1,000 acres in extent, is located just north of Mount Jefferson in a tremendous gash across the summit of the Cascades. It is 25 miles by trail from Detroit, 11 of which are along the well-traveled Minto Trail through beautiful stands of timber. The remainder of the way to the park is steep and rugged in places but passable, and the scenic beauties along the trail and in Jefferson Park should be ample compensation to the lover of mountains. Alpine meadows, bordered with fringes of alpine timber, and numerous little lakes, streams, and waterfalls characterize the landscape. A large glacier on the north side of Mount Jefferson descends almost to the park and can be reached by a few minutes' walk. The drainage from the park flows two ways—to the Deschutes River on the east and to the Santiam River on the west. The larger lakes in the park have been stocked with brook trout.

Marion Lake is on the well-traveled Minto Trail, 23 miles from Detroit. It lies at 4,000 feet elevation and is one of the largest lakes in this section of the mountains. The fishing is fine here. Three-fingered Jack is a few miles south of the lake, with many scenically interesting bluffs and buttes near by. Camping facilities are excellent. There are telephone connections. Most of the burns in this region, and everywhere in the Forest above 3,500 feet elevation, abound in luscious huckleberries.

At Marion Lake the Forest Service has surveyed and now has ready for lease at from \$12 to \$15 a year, two groups of summer-home sites—the Camp Marion group on the northwest shore and the Jefferson group on the southwest shore—locations which promise to be ideal for hunting, fishing, scenery, or quiet enjoyment.

Three-fingered Jack is especially attractive to the lover of mountain scenery. It includes a group of jagged rocky pinnacles on the main "backbone" of the Cascades at an elevation of 7,792 feet. The Minto Trail crosses the summit of the range just north of this mountain at a distance of 30 miles from Detroit. This locality may also be reached readily from the wagon road at Big Lake, a few miles south, which is mentioned later.

Big Meadows are small marshy areas 26 miles from Detroit and about 10 miles from the Minto Trail. The North Santiam River runs through them, though it is but a medium-sized creek at this point. Fishing and hunting are good. Wood, water, and horse feed are available in plenty. A telephone is located here. A branch trail leads to Three-fingered Jack, 7 miles east.

The localities known as Sisters and Cascadia are on the east and west parts, respectively, of the Willamette Valley and Cascade Mountain Military Road, built in the pioneer days from the Willamette Valley to eastern Oregon. This road crosses the southern end of the Santiam Forest and is popularly known as the Santiam wagon road, as it follows the South Santiam River more or less closely for about 50 miles. Cascadia is a summer resort on the western portion of the road 30 miles southeast of Lebanon, the terminus of a branch of the Southern Pacific Railroad from Albany, 15 miles away. The Santiam wagon road usually can be traveled from June to November by teams and from July to September by automobile, though it is a poor automobile road. Parties wishing to go by this route must furnish their own transportation facilities, as there is no regular stage. Camping accommodations may be had at

Upper Soda, 12 miles from Cascadia, the Mountain House, 15 miles, and Fish Lake, 33 miles. Beyond Fish Lake no accommodations are to be had until Sisters is reached.

From Cascadia excellent fishing grounds along the South Santiam River, Canyon Creek, and other streams may be reached. Cascadia has a hotel, a store, a camp ground, and a fine soda spring. There is a good camp site on the wagon road at Snow Creek, 24 miles from Cascadia and 9 miles west of Fish Lake. From the top of Sevenmile Hill a trail leads south 15 miles to Wolf Rock and Carpenter Mountain. The latter is a fire-lookout station and has telephone connections. The scenery from the 6,000-foot summit of the mountain is truly remarkable.

Fish Lake is about 33 miles from Cascadia and is an important stopping place, with a splendid forest camp ground. Fish Lake is the central fire-control headquarters during the summer and there can be seen here all the instruments for the location of fires on all parts of the Forest. The forest officers will take pleasure in explaining the method of locating and suppressing fires and also will be glad to give any information as to hunting, fishing, mountain climbing, etc. The lake drains dry in summer, and the dry lake bed furnishes ample feed for campers' horses.

At Clear Lake, 2 miles to the south of Fish Lake, there is excellent fishing and boats can be rented. On the eastern shore of the lake is a group of summer-home sites which may be leased for from \$10 to \$15 a year. Five miles below Clear Lake there are three large waterfalls in the McKenzie River. The lava rock in the locality makes travel difficult along the river below the lake. Clear Lake is one of the most beautiful and interesting bodies of water in Oregon. From a boat one may look down through wonderfully clear water and see the tops of large trees submerged, no one knows how many centuries ago, when this valley of the upper McKenzie was blocked by a lava flow. A good trail south from Fish Lake reaches the McKenzie River 6 miles below Clear Lake, then follows the river to the Belknap Hot Springs, about 17 miles from Fish Lake. (See Cascade Forest Section.)

Immediately on leaving Fish Lake the wagon road to the east begins the difficult ascent of Sand Mountain, the last rise to the summit of the Cascades. East of Sand Mountain the country is more nearly level and is very sandy, with a thin stand of stunted alpine timber. Two miles of this brings the traveler to the unusual camp site at Big Lake, a beautiful sheet of water near the summit of the Cascades at an elevation of about 5,000 feet and at the foot of Mount Washington, elevation 7,769 feet. A mile or more to the north is a long, steep-sided, level-topped butte called, from its shape, Hayrick Butte.

Beyond Big Lake the precise summit of the Cascades divide is reached within 2 miles, and the descent of the east slope is begun through the lodgepole and yellow pine timber. The distance from Big Lake to Sisters is about 20 miles.

The supervisor's headquarters is at Albany, and district rangers are located at Detroit and at the Cascadia ranger station, and in the summer also at Fish Lake.

SISKIYOU NATIONAL FOREST.

The Siskiyou National Forest, situated in southwestern Oregon and northwestern California, includes an area of about 1,700,000 acres in the Coast Range. These mountains, known as the Rogue River and Siskiyou Mountains, are of moderate altitude but exceedingly rough. The principal streams are the Coquille, Rogue, Illinois, Smith, Winchuck, Chetco, Pistol, Elk, and Sixes Rivers. The Rogue heads in the Cascade Range northwest of Crater Lake, and after passing through the famous Rogue River Valley, winds its tortuous way in narrow, boxlike canyons through the Coast Range to the sea.

This country has long been known as a happy hunting ground. Large herds of deer are not unusual. Small black and brown bear, cougar, red fox, marten otter, fisher, and silver-gray squirrels are common. Mountain and valley quail and part-ridge abound, and on the coast wild geese and ducks are numerous. Practically all



At the entrance to the Oregon Caves. Siskiyou Forest.

the streams afford fishing for several varieties of trout and salmon. In addition to the well-known Oregon Caves and the beautiful canyon of the Rogue River, many delightful camp grounds may be reached by automobile in a few hours from Grants Pass.

Favorite hunting resorts are: Bear Camp, Squirrel Camp, and vicinity, reached from the railroad at Merlin, Oreg., by automobile or stage to Galice, and then by pack and saddle animals over 25 miles of fair trail; Snow Camp and the head of the Pistol and Chetco Rivers, reached from the railroad at Grants Pass, by 12 hours of stage or automobile travel to Brookings, the outfitting point, and thence by wagon haul of 20 miles and pack-saddle journey of 16 miles over a fair trail; Cold Springs, Walkers Prairie, and Ninemile, all reached from railroad at West Fork (Dothan post office), the outfitting point, by pack train, a distance of 12 miles over a good trail; and Coquille River, Eden Ridge, and Squaw Basin, reached from the railroad at Powers by pack and saddle animals over 12 miles of good trail.

The principal fishing streams are Coquille, Rogue, Smith, Winchuck, Pistol, and Elk Rivers. There are attractive summer camps along the Rogue and Smith Rivers. Many beautiful sites may be found on all the important rivers and their tributaries.

On the middle fork of Smith River, adjacent to Smith Fork ranger station, the Forest Service has set aside the Gasquet forest camp and summer-home sites, which may be leased at \$10 per annum. This tract is on an automobile road with mail and automobile stage route 18.7 miles to Crescent City, Calif., or 77 miles to Grants Pass, Oreg.

The Southern Pacific Shasta route parallels the eastern boundary of the Forest about 10 miles distant. The Southern Pacific from Marshfield has been extended to Powers, Oreg., a few miles from the northern boundary.

THE OREGON CAVES.

The Oregon Caves, called by John Muir "the Marble Halls of Oregon," are located within the Siskiyou National Forest. They are in Cave Mountain, a peak of limestone formation about 6,000 feet high, in Josephine County, in southern Oregon. From an interesting but inconveniently accessible minor attraction long known to southern Oregon people, the Oregon Caves are becoming one of the major scenic attractions of the State. This is shown by the visitors' records at the Caves, which in 1921 indicated about 1,000 persons, while the 1923 records, after the new road was completed, showed over 44,000 people visiting the caves. From Grants Pass to the caves the trip is made over a new automobile road 53 miles long. This road, completed in the spring of 1922, was built cooperatively by the Forest Service, the Bureau of Public Roads, the Oregon Highway Commission, and Josephine County.

Arrangements for guide service, lights, etc., for the underground trip through the caves can be made at the inn at the cave entrance, which is at the end of the automobile road. The entire underground trip is over 4,000 feet if all the caverns are visited, and it consumes about three hours. The main openings of the caves are at about 3,500 feet elevation, but the entire mountain side for 5 or 6 miles contains caverns, and it is probable that its whole interior is honeycombed. Miles of galleries have been visited. The caves are more a series of galleries than of roomy caverns, although many beautiful rooms have been discovered. Thousands of passageways lead in all directions, many of which are partly closed by stalactites and have never been opened. There are many beautiful formations in the caves, and a small stream is found at the lowest level. The Forest Service has laid out a tract along the road and within 8 miles of the caves which provides building sites for a tourist hotel, cottages, and filling station. An attractive public camp ground was laid out here in 1923.

From the caves a number of pleasant short trips may be taken to the summit of Cave and Lake Mountains, 12 miles from the caves; Bolan Lake, 12 miles from Holland; and Youngs Valley and Preston Peak, just south of the Klamath Divide, and 7,300 feet high.

Next to the trip to the caves, the most spectacular trip is the pack trip from Alameda to Gold Beach, over the Rogue River trail. The distance is 87 miles. The steel-head fishing is excellent, and the scenery is exceptional. There are hotels at Agness and Illahee.

From Grants Pass, a trip of 96 miles by automobile over the Pacific Highway takes the traveler through the Illinois Valley, Smith River country, and Mill Creek redwoods, to Crescent City.

From Crescent City, the Redwood Highway runs south along the California coast to Requa, 25 miles, to Trinidad, 73 miles and to Eureka, 110 miles. From Crescent City the Roosevelt Highway runs north along the coast to Brookings, 33 miles, Pistol River, 54 miles, Gold Beach, 72 miles, and Port Orford, Brandon, and Marshfield. These fine highways lead through some of the most interesting country in Oregon.

From Gold Beach a gasoline mail boat goes up Rogue River 32 miles to Agness, from which place a trail leads to Bear Camp and Snow Camp. An automobile road also leaves Gold Beach, goes north along the coast to Arizona Inn, 16 miles away, and to Middle Elk River and the trail to the hunting and fishing camps on Elk River, 25 miles, Port Orford, 32 miles, and lower Elk River, 34 miles.

From Merlin, on the Southern Pacific, an automobile and stage road goes 16 miles to Galice, and from there trails lead to Bear Camp, Briggs Valley, and other hunting and fishing resorts. From Galice a Government trail goes down Rogue River gorge.

The Forest Service has constructed 250 miles of good trails, which, with older trails, make even the more remote parts of the Forest accessible to saddle and pack animals without great difficulty. Regular hotels are numerous along stage roads; and although settlements in the Forest are sparse, the traveler need seldom go more than a day's journey without finding accommodations at the cabin of some settler or prospector. Many of the more popular resorts are now reached by Forest Service telephone lines.

The supervisor has headquarters at Grants Pass, and district rangers are located at the Rand, Shasta Costa, Page Creek, West Moore, and Smith Fork ranger stations.

SIUSLAW NATIONAL FOREST.

The Siuslaw National Forest is located in the counties of Tillamook, Yamhill, Polk, Lincoln, Benton, Lane, Coos, and Douglas. It includes the summit of the Coast Range, and borders the coast of the Pacific Ocean for a number of miles. It comprises a net area of Government land of approximately 543,383 acres.

Much use has been made of the Forest and its immediate vicinity by fishermen, campers, hunters, automobilists, and other tourists. The numerous lakes, rivers, streams, and the ocean with its rocky promontories, its wave-beaten cliffs, its coves, caves, and excellent beach afford recreation and diversion.

Boating, fishing, and duck hunting are favorite pastimes on the lakes; the mountains abound with deer, bear, and wildcat; the streams, rivers, and lakes are well supplied with fish. There is trout fishing in the streams, and salmon trout fishing and trolling for salmon in the rivers. Trout fishing is best in the spring and early summer, particularly during the months of April, May, and June, before the water gets too low. Trolling for salmon is yearly becoming a more popular sport on all the large rivers, such as the Nestucca, Siletz, Alsea, Siuslaw, Umpqua, and Coos Rivers. September and October are the most favorable months for this kind of fishing.

Where the Forest borders the ocean there is an excellent beach and surf bathing. The summer camper finds ample diversion in fishing from the rocks and in digging clams and hunting for agates, sea shells, and other curiosities along the beach. For deep-sea fishing at practically any time of the year fishing smacks may be hired at the river harbors.

In order to reach the more favorable fishing and hunting grounds that are found on the Forest, it is nearly always necessary to pass through some of the principal

summer resorts in the immediate vicinity. The Forest can be reached from any of these places in from one to ten hours' time.

Nestucca Bay and Devil Lake are popular resorts which do not lie directly within the Forest but are close to its boundary. Nestucca Bay and the Salmon River country can be reached by wagon or automobile via Willamina and Dolph. Pacific City is the principal resort. Devil Lake affords excellent hunting and fishing.

Drift Creek, a tributary of Siletz River, affords good fishing. To reach it a boat must be taken from Taft, at the mouth of Siletz Bay, for a distance of 8 miles up the Siletz River, then travel is over a foot trail for about 3 miles. Siletz Bay is reached by wagon via Willamina, or by wagon, automobile, or stage from Toledo.

The Table Mountain country offers good hunting opportunities. It is reached by trail from Tidewater, the head of tide on the Alsea River, where pack animals can usually be procured. The Alsea River affords good fishing, as does Drift Creek, 3 miles above Waldport. Alsea Bay is reached by automobile or wagon via Alsea.

Yachats is a popular resort. Here a first-class camp and pasture grounds are found, food supplies may be purchased, and pack horses and guides hired to reach hunting grounds within the Forest, especially Klickitat Mountain and the surrounding country. Yachats is reached by way of Waldport, which is a half day's stage trip south from Newport, the terminus of the Southern Pacific line to Yaquina Bay.

Three miles south of Yachats is Cape Perpetua, with its striking scenery and good camping places upon the Forest. Mussels and clams are found here, and there is good deep-sea fishing. Cape Creek affords a limited amount of fresh-water fishing.

At Cape Perpetua, overlooking the roughest and most picturesque part of the Oregon coast, the Forest Service has set aside a summer home-site tract, on which lots may be leased at the rate of \$10 per annum. As a combination of beach and forest recreation the location is ideal.

Samaria, at the mouth of Big Creek, and Heceta are two well-known camping places within the Forest. These places are privately owned, but the adjacent forest land offers good fishing along Big Creek and good hunting on the high ridges in close proximity. The Grassy Mountain State Game Refuge is about 3 miles to the east of the coast line near Heceta. No game birds or animals may be hunted, but predatory animals may be killed and fish may be taken. People from the south can come out by hired team from Florence. From the north, Samaria and Heceta can be reached by wagon and automobile.

Siuslaw Bay is reached by rail via Eugene. Its principal towns are Florence, Mapleton, and Glenada. To reach the Forest it is necessary to pass through these places. It is possible to travel by automobile or wagon from Eugene to Mapleton. A wagon, lightly loaded, could go from Florence, over 3 or 4 miles of loose sand roads, to the beach and thence to northern points. Light-draft boats can now reach Florence.

The North Fork Smith River country presents fair fishing and hunting opportunities. It is accessible by boat from Mapleton for 1 mile down the Siuslaw River to Hadsell Creek, and the rest of the way by a poor trail. There are several old cabins along this trail which could be used by campers, but horse feed would have to be packed in. It requires from one to two days' travel to reach this country.

Siltcoos, Woahink, and Tahkenitch Lakes are from 3 to 15 miles south of Glenada and are readily reached by railroad. An inland road also gives wagons access to these lakes from Glenada. At Siltcoos there are gasoline launches and rowboats for hire.

At Siltcoos, on Siltcoos Creek, a few miles from Ada and Lane on the Southern Pacific Railway and reached by boat from these points on Siltcoos Lake, a number of lots have been surveyed for summer-home sites. These lots may be leased at from \$7.50 to \$10 a year. Here as at the Cape Perpetua home-site area there are both beach and forest.

Winchester Bay at the mouth of the Umpqua River is reached from Eugene. Scottsburg and Gardiner are located on the Umpqua River, as is Reedsport, through which the railroad passes. Light-draft boats can reach Gardiner from the coast.

North and South Tenmile Lakes, with hotel accommodations, are located on the Southern Pacific line from Eugene to Marshfield. They may also be reached by automobile over an inland route from Coos Bay. Gasoline launches and rowboats can be hired on South Tenmile Lake. The Forest lies one-half mile west, and Tenmile Creek affords good fishing possibilities.

Coos Bay can be reached by railroad from Eugene. Travel from the south would be principally by wagon or automobile from Roseburg. The main points of interest are North Bend, Marshfield, and Allegany. Large boats from northern and southern points can reach Marshfield and North Bend. The Millicoma country offers fair fishing opportunities in the spring and summer, as well as good hunting during the open season. It can be reached from Allegany in from one to two days' travel and is accessible also from Scottsburg.

By way of the Southern Pacific line from Eugene to Marshfield, and the roads and trails of the Forest Service, the country lying within the Siuslaw National Forest becomes readily accessible, and its numerous resorts with their excellent fishing and hunting possibilities make it one of the most popular recreation places in Oregon.

The supervisor has headquarters at Eugene and district rangers are located at Waldport, Florence, Mapleton, Gardiner, and Hebo.

UMATILLA NATIONAL FOREST.

The Umatilla National Forest is located on a spur of the Blue Mountains, in southeastern Washington and northeastern Oregon. The Forest is in three divisions—Wenaha, Eastern, and Western—with a total area of 1,222,786 acres. The Forest provides a summer range for many thousands of sheep and cattle and is extremely important as a watershed protection forest for many streams which are used in the intensely irrigated fruit lands in the surrounding valleys. It has no striking scenery; that is, no beautiful lakes or rugged peaks, but it is practically surrounded by farming country and is a good camping, fishing, and hunting ground.

The Forest lies on a plateau from 3,000 to 7,000 feet above sea level. The valleys are canyonlike and from 2,000 to 3,000 feet lower than the plateau. The surrounding country is from 1,000 to 3,000 feet above sea level.

Owing to the warm weather in the surrounding country during the summer months, the forest and mountainous region, where the temperature seldom exceeds 85 degrees, is much frequented by campers and pleasure seekers. From 8,000 to 10,000 people take advantage of the cool mountain air and pure, cold water each season—some just for an outing others for fishing and hunting.

The streams are fully stocked with fish each season and good catches are frequently made. Asotin Creek and Tucanon River, in the northern part of the National Forest, are fished extensively by people from Asotin, Pomeroy, Dayton, and Walla Walla, Wash. Mill Creek and the Walla Walla River afford excellent sport for the Walla Walla, Milton, and Freewater fishermen. The Umatilla River and Meacham Creek, in the southwestern part of the Wenaha Division, are frequented by residents of Pendleton, Oreg. People who have time to take a two or three weeks' fishing trip generally go to the Wenaha River, where the fishing is as good as any on the Forest. It takes from two to three days to reach the river from the surrounding settlements. Meadow, Camas, and Big Creeks in the Eastern Division have been stocked and are fished in season. There is some fishing in Potamus Creek and Ditch Creek, in the Western Division, but these latter streams are apt to go dry in spots throughout their entire length.

Grouse hunting is generally good throughout the Forest. Approximately 1,000 elk are scattered over the Wenaha and Eastern Divisions. The elk are protected by law in both Washington and Oregon and consequently afford excellent opportunities for camera hunters. Large game is not very plentiful except in isolated areas. About



Cattle grazing in National Forest.
On the Wenaha River, in eastern Oregon, Umatilla Forest.
The result of somebody's carelessness.

75 black and brown bear and about 300 deer are killed each season. Some seasons huckleberries are plentiful, at other times they are killed by June frosts.

While there is no really striking scenery, the rough, rolling hills have a beauty of their own. The ridges are generally narrow, covered partly with timber and brush and partly with open bunchgrass, and the canyons are deep and narrow. An excellent view of the Grande Ronde Valley and of La Grande and other small towns in the valley may be obtained from Mount Emily, which is reached by a wagon road from La Grande. An automobile road to the top of Lookout Mountain, elevation 7,000 feet, has been completed. An excellent view can be had from this point.

Lots for summer home sites have been surveyed and set aside at the following places: Godman Springs, Clearwater, and Mount Emily. These lots may be leased for \$10 a year.

There are three mineral springs, all of which have warm sulphur water, and there are resorts where accommodations can be secured.

Bingham Springs, also known as Wenaha Springs, is visited by thousands each season. This resort is on the Umatilla River, which furnishes first-class fishing. These springs are 30 miles east of Pendleton and may be reached by automobile. The nearest railroad station is Gibbon, Oreg., 22 miles east of Pendleton, Oreg. A stage connecting with all trains, runs during the open season from June to September. A State fish hatchery is also located at Bingham Springs.

Lehman and Hidaway Springs, 52 and 54 miles, respectively, from Pendleton may be reached by a good summer automobile road from Pendleton via Pilot Rock.

The Tollgate, on the main divide, 30 miles southeast of Walla Walla, is a noted summer resort, with an elevation of nearly 5,000 feet. There is a hotel with adjoining camp grounds. This resort is visited by hundreds of people each summer during July and August. The surrounding country affords good grouse hunting and huckleberry picking.

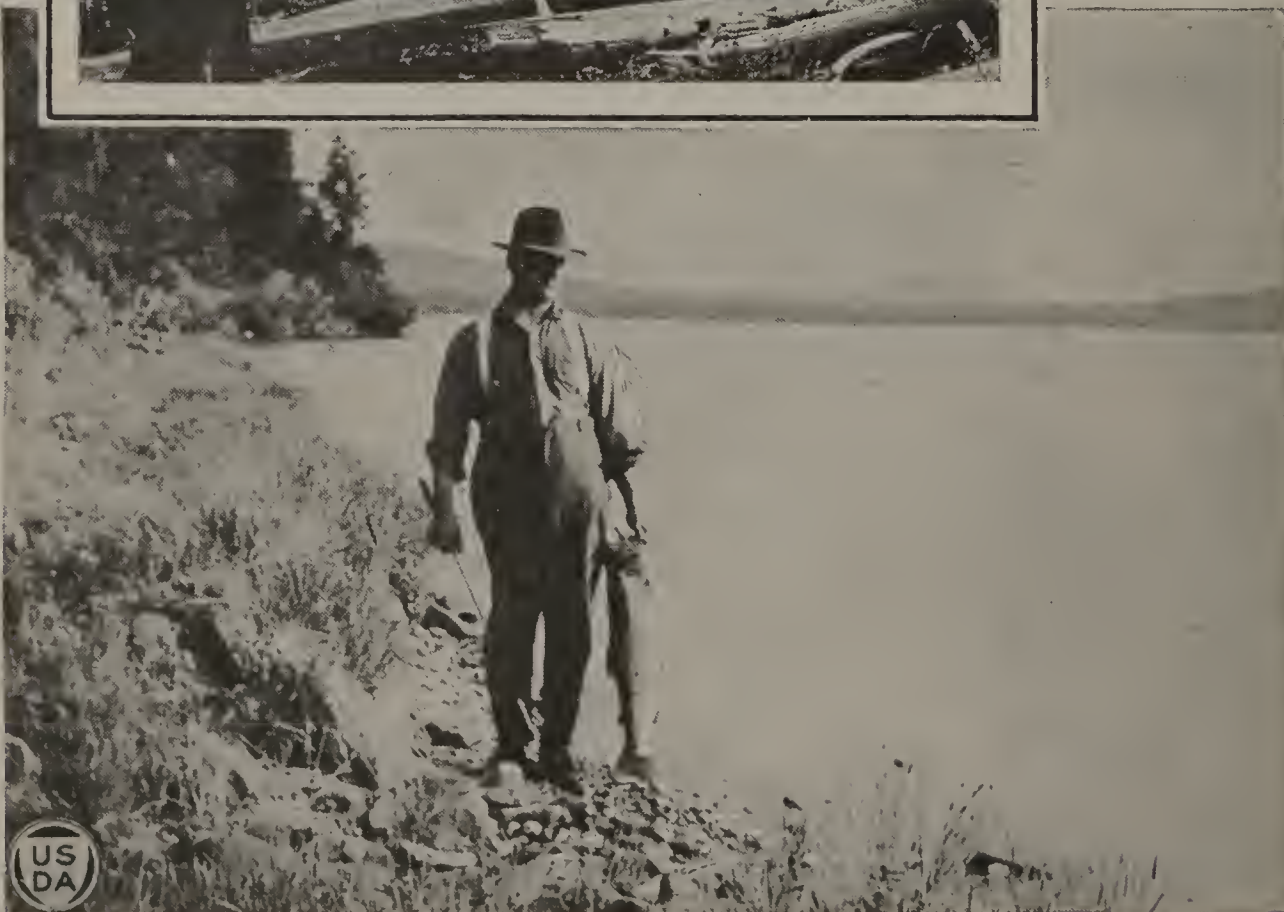
A road is now under construction along the main divide from Godman Springs to the Tollgate. This road when completed will be one of the most scenic drives in eastern Oregon. The Forest is traversed by a number of summer automobile roads. In the Wenaha Division a road runs from Pomeroy, Wash., crossing the divide at Mount Misery ranger station where a road branches off to Antone and Asotin, to Troy, Oreg., at the mouth of the Wenaha River and connecting there with a road to Wallowa. The last link of this road at Saddle Butte was completed in 1923. The old Woodward Toll Road crosses the mountains between Walla Walla and Grande Ronde valleys. On the Western Division a summer automobile road runs from Heppner via Hardman and Parker's Mill to Monument in the John Day country, and from Heppner via Hardman to Spray on the John Day River. In the Eastern Division, the road from Lehman Springs to Starkey runs east and west across the Forest.

The headquarters of the supervisor is in the Post Office Building, Pendleton, Oreg. Information may be obtained on the ground from the forest rangers at Pomeroy, Dayton, and Walla Walla in Washington, and Heppner, Ukiah, and Gurdane in Oregon.

UMPQUA NATIONAL FOREST.

The Umpqua National Forest is bounded on the east by the summit of the Cascade Range, on the north by the Calapooya Mountains, and on the south by the Umpqua-Rogue River divide. The Forest is, therefore, identical with the upper basin of the Umpqua drainage system, except for an additional unit of about four townships on the north, which is included in the Willamette watershed. The area is 1,011,022 acres.

Two major drainage lines cross the Forest, the North and South Umpqua Rivers. These streams and their tributaries have cut deeply and sharply into the long western slope of the Cascade Range, thus forming a labyrinth of steep, dark canyons and



Any sort of old pole will do. Near the head of the North Umpqua.
The waste of forest fires.

A 12-pound rainbow trout from a National Forest lake.

narrow, irregular ridges. An exception to this rule is the extreme headwaters of the North Umpqua, where the valleys have been glaciated and later filled in by pumice deposits. In this region many of the streams come to the surface in full volume from their underground channels.

Most of the region is covered by a heavy forest, with Douglas fir at the lower altitudes and Shasta red fir and mountain hemlock as the principal species of the high country.

Forage for campers' use is scarce at lower elevations, but there are numerous open parks scattered throughout the higher portions of the Forest where feed, fuel, and water are available without limit. A day's travel from settlement over any route will bring the camper to the edge of this region, but two or three days are required to reach the most popular localities. Most of the feed areas are grazed over at some time during the season by stock under permit. Suitable camp sites are available in the interior of the Forest.

Fishing is good anywhere in the North Umpqua and its tributaries below the Toketee Falls, about 75 miles east of Roseburg, Fish Creek being the last and best of all. Owing to the height of these falls, there are no fish about this point. Diamond Lake has recently been stocked, however, and the upper streams will eventually be supplied from this source. The South Umpqua is not a particularly good fishing stream, although most of its tributaries are fairly well stocked, but Little Fish Lake, near the head of the South Umpqua, is exceptionally good.

Game is fairly abundant throughout the Forest, but particularly so in the South Umpqua region.

At the headwaters of the North Umpqua River the State of Oregon has established a bird and game refuge. The main object of this refuge is to provide a natural deer-breeding ground. The boundaries are rather roughly defined, but the hunter should look out for game-refuge posters east of Fish and Boulder Creeks.

Special points of interests on the North Umpqua are Cape Illahe, at one time famous as an Indian rendezvous and race track; Soda Springs, on the river 6 miles above the Illahe; Toketee Falls and gorge, reached by trail from Big Camas via the Fish Creek Desert Junction; the Hot Mineral Springs on the north Umpqua above Mountain Meadows; Bradley Falls, a few miles below Kelsay Valley; Spring River, a short tributary of the Umpqua, which comes to the surface a full-grown river; Watson Falls, where the waters of Watson Creek drop over a 300-foot cliff; several small but beautiful falls in the Clearwater River; Diamond Lake at the end of the trail; and Black Rock, where, from the concrete and glass ranger lookout station, a good view of nearly the whole Umpqua Forest may be obtained. Mount Thielsen is the highest peak in the Forest and has an elevation of 9,178 feet. The South Umpqua has few points of special scenic interest, although Black Rock and Diamond Lake are accessible by this route as well as by the North Umpqua.

Diamond Lake, elevation 5,182 feet, located about 12 miles north of Crater Lake, may be reached by automobile either from Medford or Klamath Falls or from the Crater Lake Rim Road. This lake, which is about 3 miles long and stocked with fish, is a delightful place for campers, its shores being very well adapted to recreation purposes. There is a summer-resort hotel here, summer home-site lots, a forest camp, and other conveniences for the recreationist. Pure cold spring water bubbles up here and there, and deer are plentiful within a short distance from the lake. Rainbow trout here nearly reaches its maximum of development. Large fish, up to 30 inches long, are caught frequently during August. Diamond Lake is midway between Mount Bailey, 8,356 feet in elevation, and Mount Thielsen, 9,178 feet, and wonderful views may be had from these mountains.

The Bohemia country, best reached from Cottage Grove, is easy of access, furnishes a panorama of strikingly beautiful views, and is an ideal place for the camper who is looking primarily for a place to rest.



Mount Bailey from across Diamond Lake. Umpqua Forest.
 Sheep bunched for the night at an elevation of over 8,000 feet. Wallowa Forest.
 Good ones from Diamond Lake. Umpqua Forest.

To summarize: Go to the South Umpqua for hunting; to the Bohemia country for a week-end trip or the rest cure; to Diamond Lake for big fish; and for an all-around vacation excursion, take the North Umpqua. Roseburg is the most important railroad and outfitting point.

The supervisor's headquarters is at Roseburg, and district rangers are located at Layng Creek, Wolf Creek, Big Camas, and Tiller ranger stations, and at Glide, Oreg.

WALLOWA NATIONAL FOREST.

The Wallowa National Forest, comprising 957,579 acres, is located in the extreme northeast corner of the State. It is bounded on the east by Snake River, and on the north it nearly touches the Washington State line. Presenting a variety of topographic forms, from the gently rolling prairies to the very characteristic and precipitous "rim rocks" on the Snake and Imnaha Rivers and the grand, bold, granite peaks of the Wallowa Mountains, the Forest contains some of the finest and least-known scenery in Oregon. With a very great range in topographical features, there is a corresponding range in altitude and climate. From Snake River, which is at an elevation of less than 1,000 feet, the canyon rises in scenic grandeur and ruggedness over a mile above the stream. The higher mountains, which include Eagle Camp and many other beautiful peaks, rise 9,700 feet in altitude, so that perpetual snow and some minor glaciers are found. This region is far too little known.

The vegetation is the usual alpine variety and includes mountain heaths and hedges; and, if the traveler has keen eyes and will climb the rougher and more inaccessible places, he will find patches of the rare and very beautiful forget-me-not. At the same time he may get a glimpse of the almost extinct mountain sheep. This section has been aptly termed "the Switzerland of Oregon." At present it is the region for the hardy camper and mountaineer, and he will be well repaid for his pains. Some day this wonder region will be more accessible, with a consequent lessened charm for the real outdoor man who finds his greatest pleasure in regions inaccessible except to the hardiest tourist.

The Forest, excepting the higher mountains, is a series of timbered plateaus which have been cut by streams and rivers. Along the Snake and Imnaha Rivers the slopes are timbered.

A great deal of this region is unsettled, and transportation is limited to the pack horse, but many interesting trips can be made by automobile. The Imnaha Canyon, Lostine River to within 8 miles of Minam Lake, and the Chesnimnus station are accessible to automobile travel. As in all other mountainous regions, the most beautiful views are obtained after the most arduous climbs.

There are excellent sites for summer homes at Minam, Mirror, Horseshoe, and Aneroid Lakes. Good camp locations are to be found almost anywhere. All of these lakes, and many smaller ones, are stocked with game fish. For persons not wishing the hardships of camp life, excellent facilities for enjoyment are offered at Wallowa Lake, near Joseph, Oreg., where ample accommodations are provided by an amusement company. Fishing, swimming, and boating are to be had during the summer.

There is excellent fishing in the largest rivers and their tributaries. All are readily accessible either by road or trail. On the Minam and Imnaha Rivers fishing is not good until the middle of July. This is due to high water in these streams until that time. In a general way, fishing is good from April to September in the lower canyon and during July and August in all the streams in the higher mountains.

Hunting is best in the northern half of the Forest and along the breaks of Snake River. There is a noticeable lack of both deer and game birds in the high mountains. Along the Minam River deer are usually found in abundance, but they are difficult to hunt because of the steep slopes. A few hours spent in the Cold Springs region or the Snake River country will usually net the bag limit of birds.

The supervisor's headquarters is at Wallowa, and district rangers are located at Wallowa and Joseph, and at the College Creek and Chico ranger stations.

WHITMAN NATIONAL FOREST.

The Whitman National Forest comprises an area of 1,313,738 acres of public land lying in the northeastern part of Oregon. The Forest is in two separate tracts or units. The Minam unit lies on the southern and western slopes of the Wallowa Mountains, and the larger or Whitman unit, separated from the Minam by the Powder River and Grande Ronde valleys, is situated in the heart of the Blue Mountains. Although the principal outfitting point for either of these areas is Baker (which is also the supervisor's headquarters), for the sake of clarity they may best be described separately.

The Whitman unit contains several regions ideal for summer and fall outings. Perhaps the best known and most popular of these is the Anthony Lake region. The North Powder River and its tributaries originate in a series of lakes near the summit of the main divide of the Blue Mountains. Grande Ronde, Mud, Black, Anthony, Van Patten, and Crawfish Lakes are all within a short distance of each other; in fact, a person could almost make the rounds of them in a day. Fishing is good; and local rod and gun clubs, the State, and the Forest Service are working in cooperation to make it better by planting more fry each year. Crawfish Lake is stocked with eastern brook and rainbow trout.

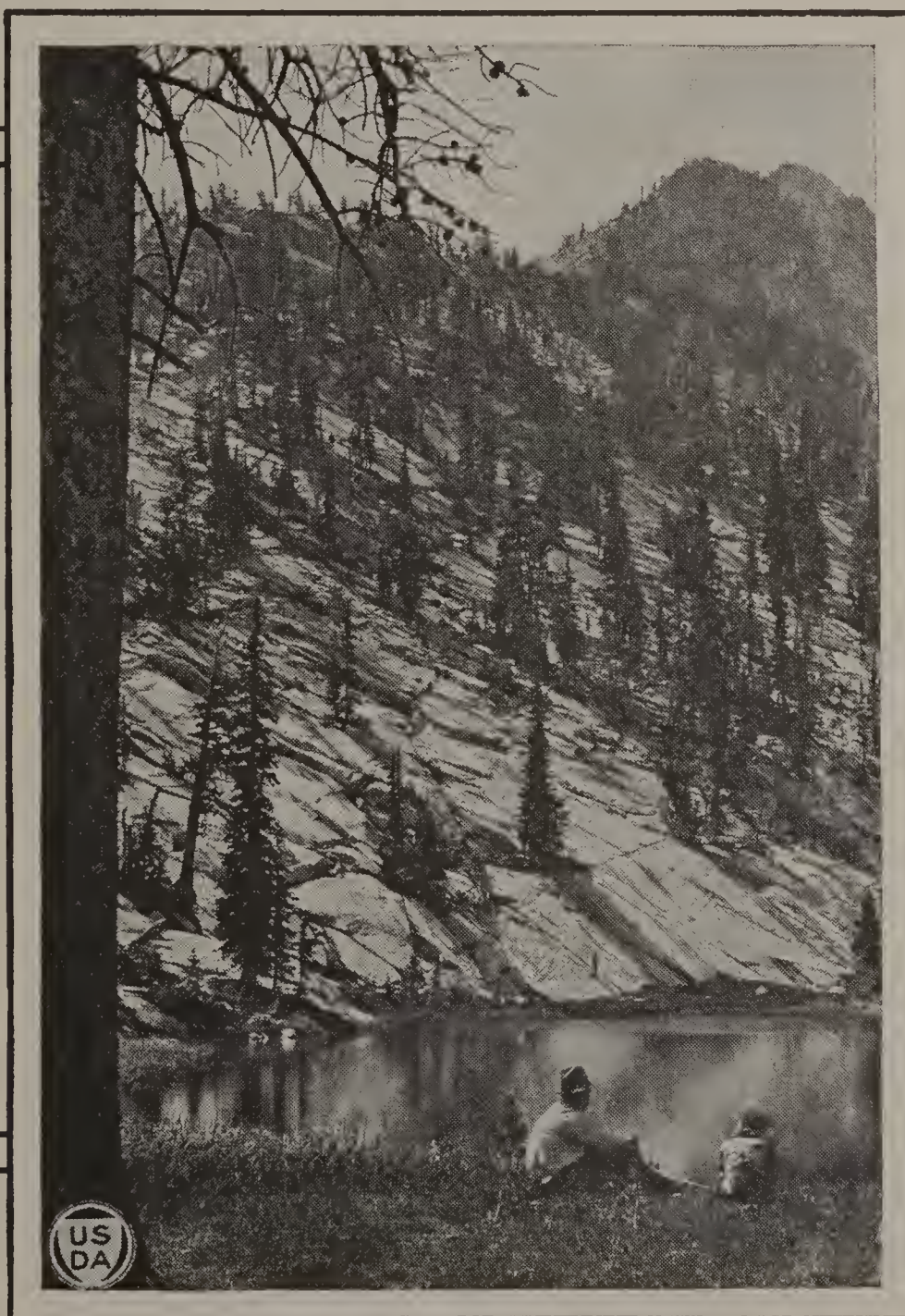
The lakes are at an elevation of about 7,000 feet. On their shores are beautiful mountain meadows, which furnish excellent horse feed. Attractive camping places with convenient wood and water are being prepared. Back of the lakes, the peaks rise abruptly in picturesque grandeur. On the summit of one of them is a Forest Service fire-lookout station, known as the Lakes Lookout. The view from this station is well worth the effort of the climb, and the lookout man, who is familiar with the country, is always ready to answer questions. The lakes may be reached by pack horse over good Forest Service trails from North Powder or Sumpter. In either case the trip consumes about one day. Pack outfits can usually be obtained at either town by notifying the local liverymen in advance. The Forest Service has constructed a good mountain automobile road from the county road on North Powder River, up Antone Creek to Anthony Lake. The Baker County Rod and Gun Club aided materially in building this road, which was completed to Anthony Lake in the fall of 1923. Lots for summer homes, club sites, and municipal and other public camp grounds are available at Anthony and Mud Lakes.

The Trout Meadows region is another popular place for fishing and hunting, and is reached by passable wagon roads from Pendleton, La Grande, and Sumpter. Trout Creek meanders through a series of large meadows, flowing in and out of many deep pools, which abound in trout. There is excellent deer hunting in the vicinity in the fall, and occasionally one is rewarded with the sight of a small herd of elk. There are many fine camping places, with good water and convenient horse feed.

Baldy Lake and Olive Lake offer excellent fishing and fair bird and deer hunting during the open season. Both are high mountain lakes. Baldy Lake may be reached from Sumpter by wagon to Cable Cove, 12 miles, then by pack horse, 3 miles. Olive Lake may be reached by wagon from Sumpter, 25 miles, or from Dale, over the new road constructed by the Forest Service, 27 miles in length.

The North Fork of John Day River, Desolation Creek, and the Middle Fork of John Day afford fine camping places and fair fishing and bird and deer hunting in season. All these streams are readily accessible and much visited.

These are only a few of the best-known camping places on the Forest. Many small streams nearer the towns offer fair fishing and beautiful camping places, and they are much enjoyed by those who can spare neither the time nor expense for longer and more difficult trips. Elkhorn Ridge, which forms the eastern backbone of the Forest, rises to an elevation of over 9,000 feet and is extremely rugged. Many beautiful views may



One of the Anthony Lakes, Whitman Forest.
High up in the Blue Mountains, eastern Oregon.

be obtained from its peaks; and small mountain lakes are found in unexpected places, many of them well stocked with fine trout.

The Minam Unit of the Whitman National Forest is particularly rugged and scenic, with numerous mountain lakes well stocked with eastern brook, rainbow, and steel-head trout. In the parks, meadows, and camp grounds mentioned later are many attractive sites for permanent summer homes. Good water and fuel are abundant. Grass for campers' horses is reserved in the best camping locations.

Crater Lake, containing 30 acres, surrounded by picturesque, perpendicular walls, is a natural wonder, located at the headwaters of Cliff River, a tributary of the Imnaha. Trolling for eastern brook trout furnishes good sport. This lake can be reached from Pine or Eagle Valley by taking the Medical Springs-Carson Wagon Road westward to the top of Summit Creek ridge, thence by pack trail following the Cliff River stock driveway to destination.

The Minam River trip is a trip for the fisherman and the hunter. From the town of Cove, the Forest Service in cooperation with the local people is completing a fair automobile road to Mill Creek Pass, a distance of 7 miles. Thence, 9 miles by pack trail over the scenic route to the Minam, will take one to the midst of good hunting and fishing grounds. The best fishing is above Millard ranger station. Fish in large numbers can be caught at the various falls along the stream and in the North Minam River. Good camping places are numerous, and horse feed is plentiful. Grouse, pheasants, deer, bear, and coyotes make their homes along this stream. For the return trip, the traveler has the choice of several different routes, all affording excellent fishing, hunting, and scenery.

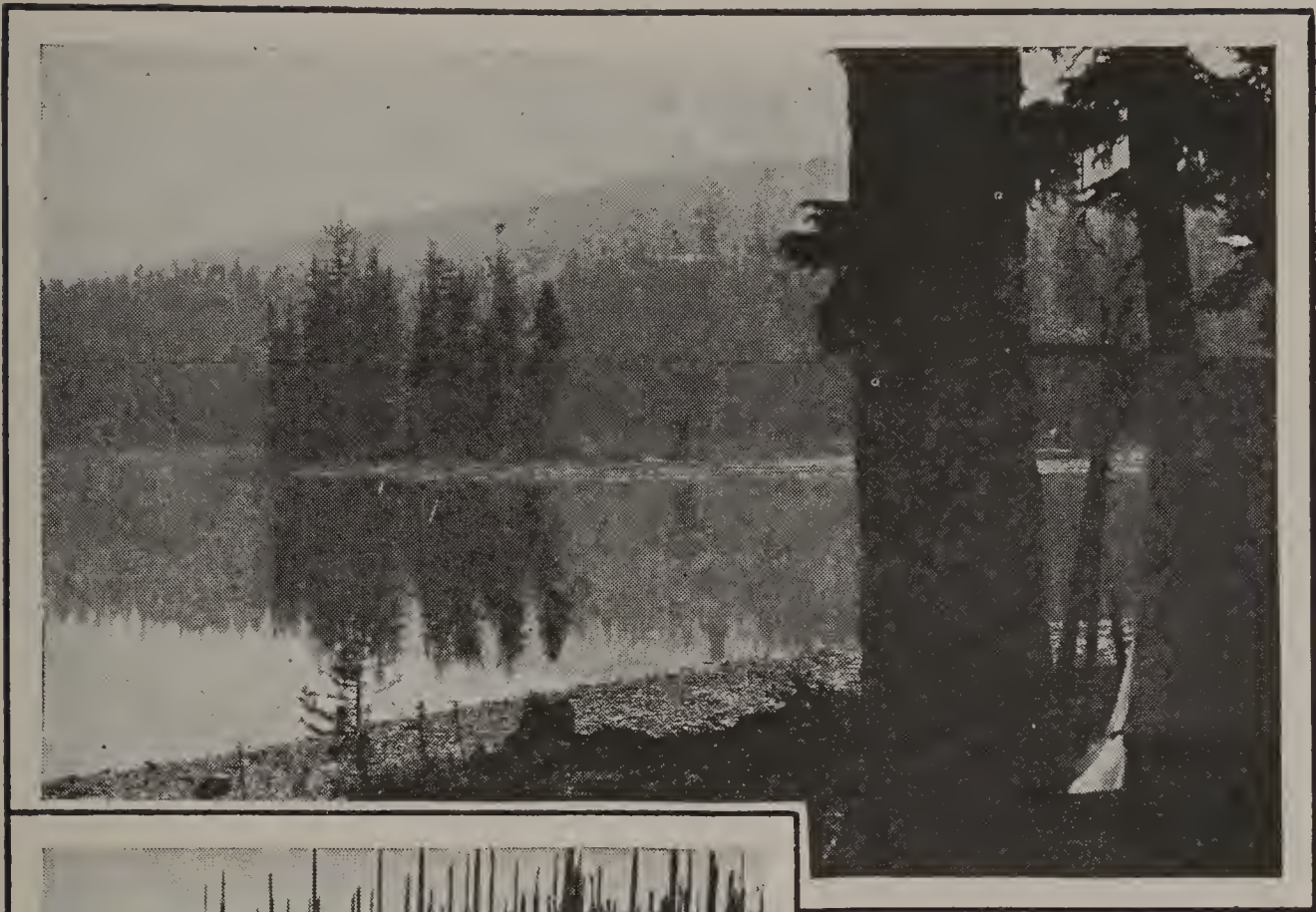
The West Eagle trip is a drive to Basin Mine by wagon or automobile; thence by pack trail along the telephone line 2 miles to Eagle Forks (a camping place with horse feed one-half mile up the main Eagle Creek); thence up West Eagle Creek 5 miles to Large Meadows (good camping, good grass, and good fishing); thence 7 miles to Echo and Traverse Lakes, at an altitude of 7,500 feet. These lakes were stocked in 1915 with steelhead trout. A splendid view of meadows, lakes, glaciers, and mountains may be had by climbing one of the 9,000-foot peaks near by.

The Eagle Forks and Two-Color Meadows trip brings one to the center of a fish and game country. It is 45 miles from Baker to Eagle Forks by wagon or automobile, going in via the Sanger Mine and Eagle River power plant. It is 3 miles farther by trail to Two-Color Meadows, a good camping place with plenty of horse feed. From here various points of interest can be visited by trail, such as "The Falls," Bennet Peak, which is in the grouse country, and on which a Forest Service fire-lookout remains during the dry months of the year, Hummingbird Mountain, and Lookinglass Lake, which was stocked with fish in 1915. A scenic route northerly from Lookinglass Lake leads through a deer country to Eagle Lake, which was also artificially stocked.

East Eagle Park is a good fishing and camping ground which can be reached from Baker by automobile in four hours. To reach East Eagle, enter the Forest near Sparta, travel north to the Medical Springs-Carson Road at the Lily White mine, thence east about a mile to the forks of the road. The left-hand road leads to Eagle Creek and East Eagle. From the Eagle Creek Bridge it is 6 miles to the park. Hunters will find deer, bear, pheasants, and grouse. Those wishing huckleberries will find a large patch east of the creek.

Along both sides of Jack Creek, a small tributary of Eagle Creek in the midst of the so-called East Eagle Park, a natural parklike area, the Forest Service has set aside a small summer-home site, including 8 lots, which may be leased by the public at the rate of \$10 per lot per annum. This is called the Jack Creek summer home-site area, and is 15 miles from Sparta and 46 miles from Baker by automobile road.

If a rough trip is desired, a journey can be made to Eagle Cap and Hidden Lake at the head of the stream. Eagle Cap, about 9,675 feet, is the highest peak on the



A ranger's tent by quiet waters.

A blackened mountainside—once a green forest.

A carefully built fireplace.

Truck equipped with water tank and hose, used to fight fires near main roads.

Minam Division. From its summit can be seen hundreds of the snowcapped peaks of the Wallowa Mountains.

Fish Lake can be reached by wagon from Halfway over 25 miles of rough road. The trail offers a more desirable route of 18 miles. Hundreds of Eagle and Pine Valley people use this camp ground every summer. The red-meat trout is caught from Fish Lake by the thousands, and deer and bear are found in the heavily timbered belts in the vicinity. Grouse make their homes on Russell and Sugarloaf Mountains, about 2 miles north. Visitors to Fish Lake should not fail to visit Russell Mountain fire lookout tower.

The Imnaha River affords fine camping places, good fishing and hunting, and is reached over good pack trails from Halfway, the distances ranging from 25 to 35 miles. The most popular camping places on the river are at the Falls, the Box, and Coverdale. Huckleberries are plentiful in this region.

The Forest supervisor's headquarters is at Baker, and district rangers are located at Cove, Halfway, Medical Springs, Sumpter, North Powder, Austin, and Unity, and at the Dale ranger station.

THE SKYLINE TRAIL.

The Oregon Skyline Trail follows the summits of the Cascades of Oregon from Mount Hood to Crater Lake, a distance of about 260 miles. Some day it will be the wonder way of Oregon. Already it is becoming well known outside the State. Irvin S. Cobb and Walter Prichard Eaton have seen and written of some of its beauties. Eventually it maybe made into a highway.

Along the trail there are some 250 lakes, varying in size from the area of a city block to an area of several square miles. The larger lakes, with the exception of Waldo, have excellent fishing, and many of the smaller ones are teeming with trout. Nearly all of these waters are good for bathing. Lakes at elevations of even 6,000 feet or over, especially smaller ones, are warm enough for a comfortable swim.

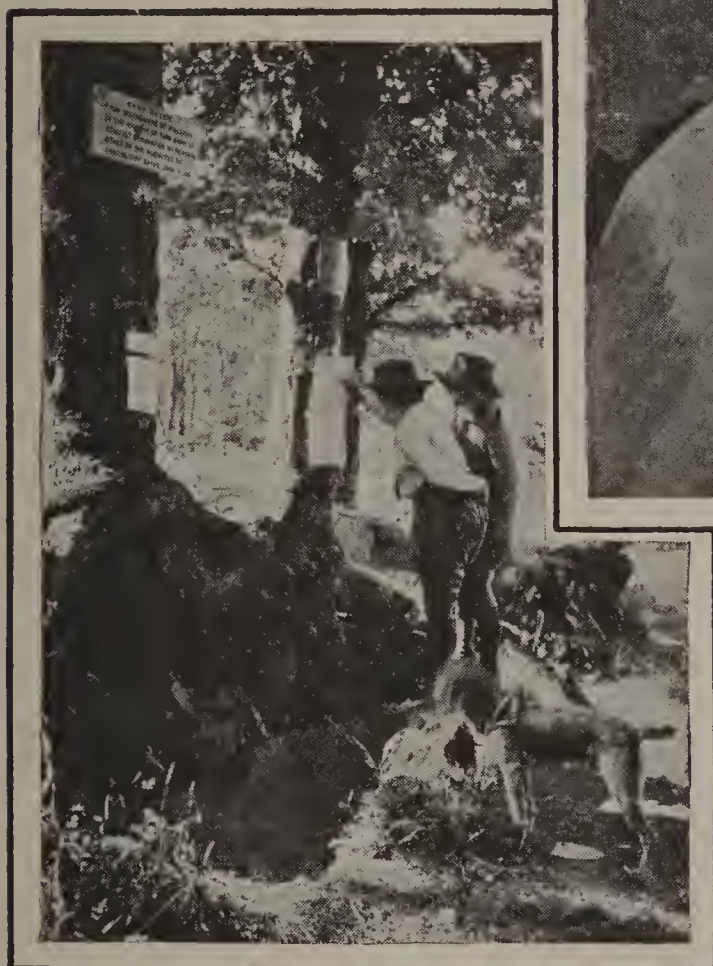
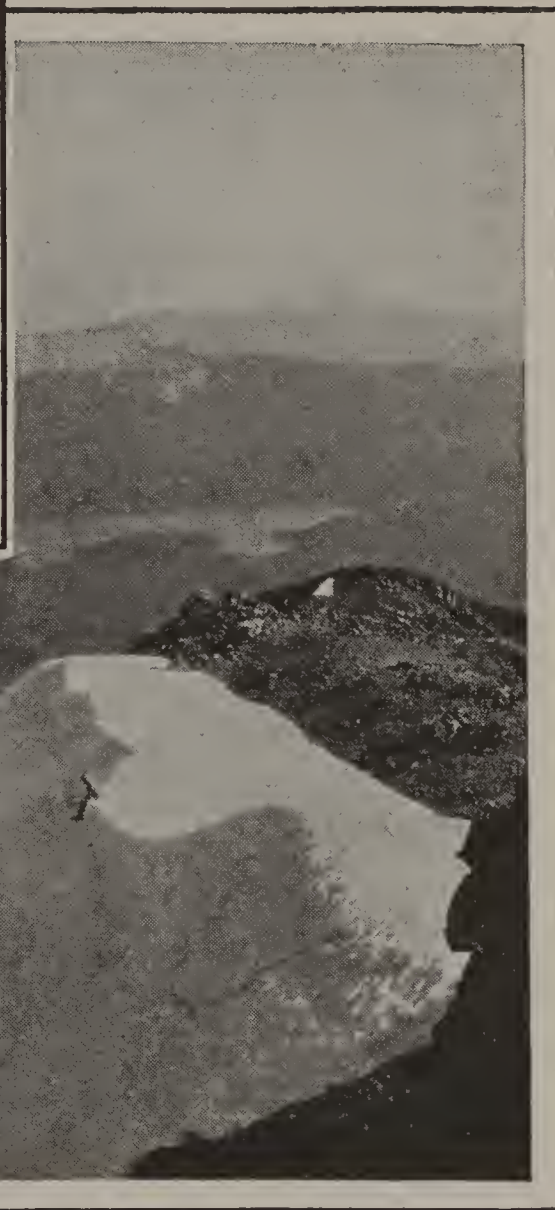
Not counting the Crater Lake National Park peaks or Mount Hood there are six major snow peaks along the route. Most of these are not difficult to scale if plenty of time is available. There are other peaks so sharp that they hold no glaciers, and one, Three-fingered Jack, has never been climbed so far as records show.

The present trail is a combination or connection of rough mountain trail and road, located or constructed in disjointed manner, at different times by forest rangers, stockmen, miners, trappers, and Indians. In some localities the trail is fairly good and easy to follow; in others it is as yet dim. There are signs about every quarter mile, except in long stretches of good, plain road or trail, where they may be a half-mile apart or less. These signs read "Oregon Skyline" and have been put up by forest officers. The trail is in high country, many peaks along the Cascade crest being 8,000 feet in elevation. There is snow from about October until the following June, and snowbanks are apt to be encountered during July. The average elevation of the trail is about 5,400 feet. The route would ordinarily be open from about July 15 to September 30.

The country is of such conformation and the timber and brush of such character that traveling is not especially difficult, even off the trails. Dense brush, as a rule, occurs only on old burns, in swamps, and on some creek bottoms.

Walking, with a back pack, is perhaps the simplest way to cover the route. To complete the entire trip requires not less than one month. To see the country properly, a month and a half or two months is better. Food supplies and a very light bed will constitute the most of one's pack if one walks.

Horses, mules, or burros with packs will give the best satisfaction. The Forest Service has set aside camping places at convenient intervals along the route where



A forest fire that covered hundreds of acres.
On the roof of Oregon.
Reading the camp rules.
Typical high mountain summer sheep range on a National Forest.

there is good grass or horse feed. Automobiles can be used only along a few miles of the route, and then over unsatisfactory grades.

Before finally planning the Skyline trip be sure to get a copy of the Oregon Skyline Trail map, from the Oregon Tourist Bureau or the Forest Service, Portland, Oreg.

INFORMATION FOR CAMPERS.

Each year campers render a service of inestimable value in extinguishing small fires before they have a chance to spread, in reporting fires which they have discovered but can not control, and in volunteering to fight the larger fires. They can render a still greater service if each camper will, himself, exercise great caution in the location, building, and extinguishing of camp fires, and if those who smoke will carefully extinguish stubs and matches. At present over one-third of the total number of fires on the National Forests originate from the inexperience or carelessness of campers. Strict observance of the following rules will save to the community annually an asset of over a million and a half dollars.

BASIC RULES FOR PREVENTING FOREST FIRES.

Secure a camp-fire permit before going into the mountains; it is required by National Forest Regulations and State laws.

1. MATCHES.—Be sure your match is out. Put it in your pocket or break it in two before throwing it away. Make this a habit.

2. TOBACCO.—Throw pipe ashes and cigar or cigarette stubs in the dust of the road, and stamp or pinch out the fire before leaving them. Do not throw them into brush, leaves, or needles.

3. LOCATION OF CAMP.—Select a spot as free as possible from inflammable material, sheltered from the wind, and near accessible water.

4. CAMP FIRES.—Never build a camp fire against a tree or log, in leaf mold, or in rotten wood. Build all fires away from overhanging branches and on a dirt or rock foundation. Dig out all rotten wood or leaf mold from the fire pit, and scrape away all inflammable material within a radius of from 3 to 5 feet. Make sure the fire can not spread on or under the ground or up the moss or bark of a tree while you are in camp, and that it is going to be easy to extinguish when you are ready to leave.

5. LEAVING CAMP.—Never leave a camp fire, even for a short time, without *completely extinguishing every spark* with water or fresh dirt free from moss and leaf mold. Do not throw charred cross logs to one side where a smoldering spark might catch. It is well to soak thoroughly all embers and charred pieces of wood and then cover them with dirt. Feel around the outer edge of the fire pit to make sure no fire is smoldering in charred roots or leaf mold. (Hundreds of fires escape each year after campers have thought they were extinguished.)

6. TRY TO PUT OUT ANY FIRE THAT YOU FIND.—If you can not put it out, get word to the nearest Forest officer as quickly as possible. Every minute saved in reaching the fire is of the most vital importance.

7. HELP ENFORCE THE FIRE LAWS; they were made to protect your interests.

OUTFIT AND CLOTHING.

Suit—preferably of some strong material, such as khaki, whipeord, or overall.
Mackinaw or sweater.

Underwear—medium weight.

Socks—two pairs medium weight or one pair heavy.

Shirt—flannel or khaki, light or medium weight.

Shoes—stout, easy, with heavy soles.

Boots.

Leggings—canvas or leather if shoes are worn instead of boots.

Gloves—buckskin.

Beds—air beds are comfortable where they can be carried, since they can be placed even on bare rocks.

Bedding—the most serviceable is a quilt of eiderdown or wool with an extra covering of denim. The quilt can be sewed or pinned with blanket pins along the bottom to form a sleeping bag. If blankets are chosen, it should be borne in mind that two light ones are warmer than a single heavy one.

A 7 by 7 foot, 10-ounce canvas, when folded, will make a ground cloth and an extra cover and is also useful as a pack cover. The Army "shelter-half" is preferred by some.

FOOD SUPPLIES.

The following list prepared in the Forest Service may be used as a guide in purchasing food supplies. The weights listed are for one man for one day. The amounts for a party for any length of time can easily be computed. All weights are net, i. e., weight of contents exclusive of containers:

Combination ration list—one man one day.

Balanced ration, one man one day.	Quantity.	Weight in pounds.	Equivalent substitutes.	Quantity.	Weight in pounds.
			Mutton or pork, fresh, or venison		1.25
			Bacon.....		.6
			Ham.....		.8
			Canned meat.....		1.0
			Canned fish.....		1.0
Beef, fresh.....		1.25	Dried fish.....		.9
			Eggs.....	¾ doz....	1.50
			Fowls or game birds, dressed.....		1.50
			Fresh fish, cleaned.....		2.0
			Cheese.....		.6
			Peanuts (with shells).....		.7
Cheese.....		.06	Meat, fresh.....		.12
			Sweet chocolate.....		.06
Beans.....		.2	Dried peas, lentils, etc.....		.2
			Rice or hominy.....		.2
			Baked beans, canned.....		.5
			Bread, baker's.....		1.0
			Pancake flour.....		.8
Flour.....		.3	Hard tack or pilot bread.....		.7
			Crackers.....		.75
			Corn meal.....		.8
			Macaroni, spaghetti, etc.....		.7
Baking powder.....	N oz.....	.048	Dry yeast (for yeast bread).....	¼ cake....	.012
			Soda (for sour dough).....	2 oz.....	.012
Oat meal.....		.15	Cream of wheat, corn meal, etc.....		.17
			Grape nuts, corn flakes, etc.....		.17
			Dried potatoes (evaporated).....		.15
Potatoes, fresh.....		.8	Dried beans, lentils, peas, etc.....		.2
			Rice or hominy.....		.2
Fresh vegetables (assorted) (onions, turnips, beets, cabbage, etc.).	}	0.45	Canned peas or corn.....	¼ can....	0.31
			Canned tomatoes.....	¼ can....	.47
			Dried or desiccated vegetables.....		.25
			Potatoes (added to staple allowance).		.40
			Dried apples.....		.15
			Raisins or currents.....		.15
Prunes (dried).....		.25	Dried peaches, figs, or apricots.....		.2
			Canned fruit.....	⅓ can....	.65
			Jam.....		.2
			Fresh fruit.....		.8
Coffee (ground or soluble).....		.13	Tea.....	½ oz....	.03
			Chocolate or cocoa.....		.08
Sugar (if no dried fruit is used, allowance may be reduced to 0.2 pound).		.35	Lemons.....	¼ doz....	.65
Sirup ¹	½ pt.....	.08	Molasses.....	½ pt....	.07
			Honey.....		.08
			Sugar (white or brown).....		.05
Milk (evaporated).....	{ Can, ⅓ pt. }	.33	Fresh milk.....	⅔ pt....	.66
Butter.....			Condensed milk.....	½ pt....	.2
		.13	Peanut butter.....		.13
			Oleomargarine.....		.13
Lard.....		.10	Lard substitutes.....		.10
			Bacon grease (can be saved if bacon is substituted for fresh meat).		.10
Salt.....	⅔ oz.....	.04			
Pepper, black.....	⅓ oz.....	.004	Red pepper.....	⅓ oz....	.0013
Pickles ¹	⅓ pt.....	.05	Vinegar.....	⅓ pt....	.04

¹ It is desirable to have pails of nesting sizes. At least one medium-sized pail of enamel or aluminum ware is recommended for cooking fruits. Stew kettles with bails may be substituted for pails, but usually do not nest as conveniently.

Combination ration list—one man one day—Continued.

Balanced ration, one man one day.	Quantity.	Weight in pounds.	Equivalent substitutes.	Quantity.	Weight in pounds.
Spices (cinnamon) ¹	$\frac{1}{8}$ oz.	0.003	{Ginger.....	$\frac{1}{8}$ oz.	0.003
			{Nutmeg.....	$\frac{1}{8}$ oz. ....	.003
			{Cloves.....	$\frac{1}{8}$ oz. ....	.003
Flavoring extract (vanilla). ¹	0.03 oz. ....	.002	{Mustard.....	$\frac{1}{8}$ oz. ....	.003
Cornstarch ¹.....		.2	{Lemon.....	0.03 oz. ....	.002
Bouillon cubes..... ²	0.1 oz.		{Tapioca.....		.02
Total weight, 5.223. ²			{Maggi soups.....	$\frac{1}{2}$ pkg. ....	.05
			{Canned soups.....	$\frac{1}{4}$ can. ....	.25

¹ Suggestive rather than essential; their use may be governed largely by individual taste, size of party, and duration of trip.

² A much lighter ration can be made up by substituting the more concentrated foods within each class. As a rule, rations made up entirely of the most concentrated foods should be avoided.

Suggested accessories are soap, dish towels, hand towels, matches, candles, paper bags for lunches, and cloth bags for sugar, rice, beans, etc.

The following table has been prepared by the Forest Service and will serve as a handy reference and guide for campers. The needs of two, four, six, or eight persons are separately provided for.

Column A indicates a complete equipment, all that would be considered necessary and convenient for a stay of a month or more; or in case transportation is not restricted as to weight.

Column B indicates an average equipment which will serve the purpose very handily for a week or 10 days; and will do for a longer stay. It is suitable for a pack-horse trip.

Column C indicates a minimum equipment, one that is really insufficient to meet the ordinary needs of a camping party, but which will suffice for a short stay and very simple cooking. It is such an outfit as a party of practical woodsmen might take and get along with, in case the packing facilities were very limited as to weight, such as a man-pack trip.

Cooking and mess equipment for various-sized camps under varying conditions.

Item.	For 2 men.			For 4 men.			For 6 men.			For 8 men.		
	Col. A.	Col. B.	Col. C.	Col. A.	Col. B.	Col. C.	Col. A.	Col. B.	Col. C.	Col. A.	Col. B.	Col. C.
COOKING EQUIPMENT.												
Cooking pails: ¹												
2-quart.....			I									
3-quart.....	I	I	I			I						
4-quart.....	2	I	I	I	I	I			I			
5-quart.....	I	I		I	I	I	I	I	I			
6-quart.....		I		I	I	I	I	I	I	I	I	I
7-quart.....				I			I			I	I	I
8-quart.....	I				I		I	I	I		I	
9-quart.....										I		I
10-quart.....				I			I	I		I	I	I
12-quart.....										I	I	I
14-quart.....										I		
Frying pan ² No. 2 (9-inch diameter)...	2	2	2									
Frying pan ² No. 5 (11-inch diameter)...				2	2	2						
Frying pan ² No. 6 (12-inch diameter)...							2	2	3	I		
Frying pan ² No. 7 (13-inch diameter)...										2	2	2

¹ It is desirable to have pails of nesting sizes. At least one medium-sized pail of enamel or aluminum ware is recommended for cooking fruits. Stew kettles with bails may be substituted for pails, but usually do not nest as conveniently.

² Frying pans with detachable handles are more convenient for packing.

Cooking and mess equipment for various-sized camps under varying conditions—Contd.

Item.	For 2 men.			For 4 men.			For 6 men.			For 8 men.		
	Col. A.	Col. B.	Col. C.	Col. A.	Col. B.	Col. C.	Col. A.	Col. B.	Col. C.	Col. A.	Col. B.	Col. C.
Extra fry pan, reflector, Dutch oven, or stove ³	I			I	I		I	I		I	I	I
Coffee pot, ⁴ 2½ quarts.....	I	I										
Coffee pot, ⁴ 3 quarts.....				I	I							
Coffee pot, ⁴ 5 quarts.....							I	I				
Coffee pot, ⁴ 6 quarts.....										I	I	
Butcher knives ⁵	I	I		I	I	I	2	2	I	2	2	I
Paring knives ⁵	I	I		I	I	I	I	I	I	I	I	I
Stirring spoons.....	I	I		2	2	I	2	I	I	2	2	I
Meat fork.....				I			I	I		I	I	
Can opener ⁵	I	I		I	I	I	I	I	I	I	I	I
Dish pan (use milk pans for small parties).....	I			I	I		I	I		I	I	I
Wash basin ⁶	I	I		I	I		2	I		2	I	I
Mixing pan.....	I			I	I		I	I		I	I	
Bread board ⁷				I			I	I		I	I	
Rolling pin ⁸				I			I			I		
Egg beater.....							I			I		
Pancake turner.....				I			I			I		
MESS EQUIPMENT.												
Plates.....	6	4	2	8	7	6	12	10	8	12	12	11
Cups.....	4	3	2	6	5	5	8	8	7	10	10	9
Saucers.....	3			5			8			10	2	2
Bowls.....	3			5			8			10	8	
Knives.....	4	3	2	7	6	5	9	8	7	12	10	9
Forks.....	3	3	2	5	5	4	8	7	6	10	10	9
Spoons, tea.....	3	I		5			7			10	8	
Spoons, dessert.....	2	2	2	6	6	5	8	8	7	10	10	10
Spoons, table.....	2	2		3	2	I	3	3	I	4	2	I
Pans (serving dishes), 2 quarts.....	2	2	I	I	I	I	2	I	I			
Pans (serving dishes), 3 quarts.....	I			2	2	I	2	3	2	3	3	2
Pans (serving dishes), 4 quarts.....				I			2	I		4	3	2
Pitchers, milk.....				I			I			I		
Pitchers, sirup.....				I			I			I		
Salt and pepper shakers.....	I			I			I	I		2	2	
Approximate weight, ⁹ pounds.....	20	13½	7	35	21	13	43	34	19½	62	46	30

³ The choice of an extra fry pan, reflector, Dutch oven, or stove for baking can best be made by the camper. If reflector or stove is to be used, bread pans of proper dimensions must be added to the list.

⁴ Pails of similar size are frequently a desirable substitute, as they will usually nest better with the rest of the outfit.

⁵ A jackknife may cover all needs.

⁶ A pudding pan is a possible substitute and nests better.

⁷ Canvas tacked onto box siding or shakes makes a fair substitute and may save from 6 to 8 pounds in weight.

⁸ A pint or quart bottle makes an excellent substitute.

⁹ Weights figured on basis of using "extra fry pan" instead of reflector or stove and using moderately heavy tin for all containers except one medium-sized pail and from one to three pans in enamel ware. Total weight would be increased about one-fourth by using all enamel ware; by using aluminum, it may be decreased about one-third.

Accessories which may be added are: Wire, or light chains with hooks for hanging pots; oilcloth for table; 1 canvas water bucket (weight ¾ to 1 pound).

Miscellaneous camp equipment to be selected according to needs: Shovel, ax or hatchet, assorted nails, lantern, canteens, 6-inch files, whetsone, rope, twine.

CAMP COOKERY.

COOKING FIRE FOR A SMALL CAMP.¹

There are many ways of building the cooking fire. The essential in each case, however, is a good permanent draft; but do not build the fire against a log or a tree or in a place where it may spread. The draft may be secured best by the method usually employed in sheep camps. The site is chosen and an excavation is made, the soil being removed to a depth of 12 inches, or approximately the depth of the shovel. The hole thus made should be at least 3 or 4 feet in width. The side exposed to the prevailing wind is then shoveled away, allowing the free entrance of air. This open-

¹ A portion of the suggestions on cooking and of the recipes is taken from Bulletin 76, "Camp Cookery," of the Oregon Agricultural College.

ing is the front of the cooking fire. The air going in passes along the side walls to the rear and thence upward, thus perfecting the draft. Select two green poles of sufficient length to extend over the ends of the hole (4 to 6 inches in diameter), one to serve as a back log, the other as a front log. Lay the poles over the hole, spacing them the proper distance to support a camp kettle, frying pan, or coffee pot. Kindle the fire beneath and proceed with the cooking. The poles can be replaced from day to day as they burn away.

When cooking frying-pan bread by reflected heat, usually a dry front pole is preferred to a green one, because the drier pole, being somewhat charred, combines with the hot coals beneath to produce a greater amount of reflected heat.

Be sure to clear away all dead twigs, leaves, or other combustible material for a distance of 6 feet to the fresh mineral soil.

CRANE FOR CAMP KETTLE.

In constructing a crane for camp kettles the height of the pole should be approximately shoulder high. The kettles should be suspended by pothooks made from small, tough saplings, trimmed to leave a projecting fork to suspend the kettle from the crane, and having at the other end a notch cut or small nail driven in at an angle to hold the kettle bail. No. 9 wire is also good for the purpose. The hook may then be grasped at a sufficient height above the fire to prevent burning the hands. By having pothooks of different lengths the desired intensity of heat can be secured by regulating the distance of the pot from the fire.

DUTCH OVENS.

In using Dutch ovens, care should be taken that the oven and lid are quite hot enough before the dough is placed in them for baking. During the preparations for baking, the oven and lid should be heated over the fire. When a good mass of coals has been obtained, the dough should be placed in the heated oven (the bottom having been greased) and the lid put on. The oven should then be embedded in the coals and the lid covered with coals and hot ashes.

Instead of a Dutch oven two pans may be used, one large enough to fit snugly over the other as a cover. Plenty of ashes and earth should be piled on top or the bread will burn.

RECIPES.

COFFEE.—Bring water to boiling point; add coffee, keep in a warm place for five minutes but do not allow to boil. Settle and serve. The coffee may be put in a small muslin bag tied loosely and the bag of grounds removed before serving.

SOLUBLE COFFEE.—Put one-half teaspoon (more or less, according to strength desired) in a cup and add boiling water.

ARMY BREAD.—One quart flour, 1 tablespoon sugar, 1 teaspoon salt, 4 teaspoons baking powder. Mix the ingredients thoroughly and stir in enough cold water (about $1\frac{1}{3}$ pints) to make a thick batter. Mix rapidly with a spoon until smooth and pour out at once into a Dutch oven or baking pan. Bake about 45 minutes, or until no dough adheres to a sliver stuck into the loaf.

FRYING-PAN BREAD.—One cup flour, 1 tablespoon sugar, 1 teaspoon salt, 3 teaspoons baking powder. Mix and add enough water to make a thick dough. Pour into well-greased, hot pan and set flat near the fire. In a few minutes it will rise and stiffen. Prop the pan nearly perpendicular before the blaze; when brown on one side, turn over. A clean silver fork stuck through the center of the loaf will come out clean if the bread is sufficiently baked.

FRYING.—Rake a thin layer of coals out in front of the fire; or for a quick meal make the fire of small, dry sticks and fry over the quickly formed coals.

If a deep pan and plenty of frying fat are available, it is best to immerse the material completely in boiling grease, as doughnuts are fried. Let the fat heat until little jets of smoke arise (being careful not to burn the grease), then quickly drop in small pieces of the material, one at a time, so as not to check the heat, turn them occasionally while cooking. Remove when done and place on a coarse paper that will absorb surplus fat. The above method is an excellent way to cook small fish.

When only shallow pans and little grease are available, to fry (or, properly, to sauté) in this manner without getting the article grease-cooked, heat the dry pan very hot and then add just enough grease to keep the meat from sticking (fat meat needs none). The material should be dry when put into the pan or it will absorb grease. Cook quickly and turn frequently. Season when done and serve hot.

STEWING.—Stewing is a very desirable way of cooking coarse and tough pieces of meat. Put the meat cut into small cubes into a hot frying pan. Let it brown, add a small quantity of sugar, if desired, and sliced onions. Cook until the onions are tender, then pour the contents of the frying pan into the stew pan, and add enough boiling water to cover the meat and let it simmer gently for two or three hours. Flavor with salt, pepper, herbs, or curry powder. This dish may be thickened with browned flour, and vegetables may be added—turnips, carrots, etc., cut into small pieces and browned with the meat.

BOILED RICE.—Wash the rice well and sprinkle into a kettle of salted water, boiling hard all the time. After 30 or 40 minutes pour off the water and place the kettle near the fire so that the grains may dry and swell.

CANNED GOODS.—Before using canned goods see that the ends of the cans are sunk in. If the ends are swelled or bulgy it usually means fermented contents and spoiled goods. After a can has been opened pour contents immediately into enamel-ware dish. Never leave food in the original cans.

DRIED OR EVAPORATED FRUIT.—Wash and pick over the fruit, soak overnight in the water (cold) it is to be cooked in, using only enough water to cover the fruit. Simmer from 2 to 3 hours; sweeten before removing from fire. Do not use an iron vessel, or permit the fruit to boil hard. Keep closely covered.

DISPOSAL OF REFUSE.

Burn all cooking refuse in the camp fire; it will not affect the cooking. Burn everything—coffee grounds, parings, bones, meat, fish heads, even old tin cans—for if thrown out anywhere, even buried, they will attract flies. Refuse once burned will not attract flies.

If burning is impracticable, dig a hole for the refuse, leaving the earth piled up on the edge, and cover every addition with a layer of dirt.

PACKING.

The packsaddle is firmly cinched; the portions of the outfit are carefully suspended upon it; and the whole is secured by a rope with a single hitch, which is so tied as to bind the load to the animal. The usual packsaddle is of the sawbuck type, as shown in the illustrations on page 50. Care should be taken in saddling the animal. Too many blankets are as bad as not enough, for either causes a sore back. After the blanket has been used on a long, hot trip, it should be rinsed out in cold water and hung up to dry without wringing. If dried in this manner and carefully folded, it can be kept from wrinkling without much difficulty. The horse's withers should be noted after the saddle is cinched; and if the forks of the saddle are not free, more blankets should be used on the side of the horse under the bottom of the saddle. A single-cinch saddle with breeching and breast straps is preferred, although double-cinch saddles are used. The saddle should be kept tightly in place and evenly balanced.

In Figure 10 are shown two canvas pads with leather corners, filled with grass and cross ribs to support the canvas. Figure 9 shows the underside of this pad and the leather-bound holes in the center for placing over the horns of the saddle. Figure 8 shows the outside of this pad with hardwood rib on each side. If a little care is taken in placing fresh hay in these pads from time to time, sore ribs on pack animals may be done away with. The pads make an excellent protection for the horse in packing supplies in boxes, etc. Bear or elk grass is preferred for filling.

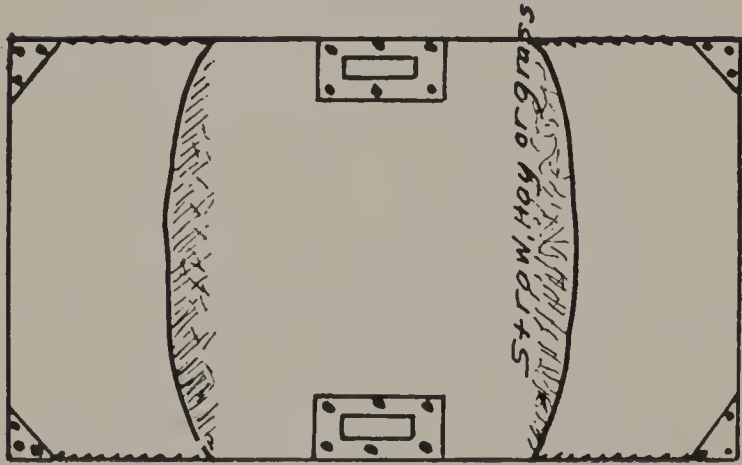
The rope as shown in figure 10 is known as the sling rope and is only to be used where alforjas are not available. Figure 11 shows the sawbuck packsaddle rigged with these sling ropes without the canvas pads. Figure 12 shows how such a sling should be tied. Two half-hitches are taken in the middle of the sling rope and dropped

8



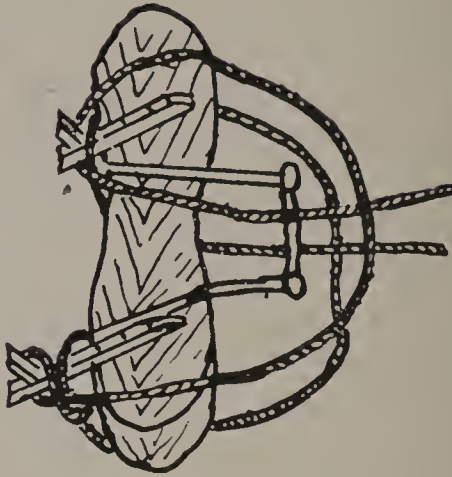
Upper Side of Canvas Pad

9



Sawbuck Saddle Equipped with Canvas Pad and Slings Ready for Packing

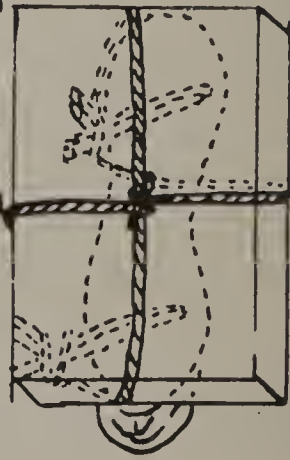
11



Sawbuck Saddle with detail of Slings

12

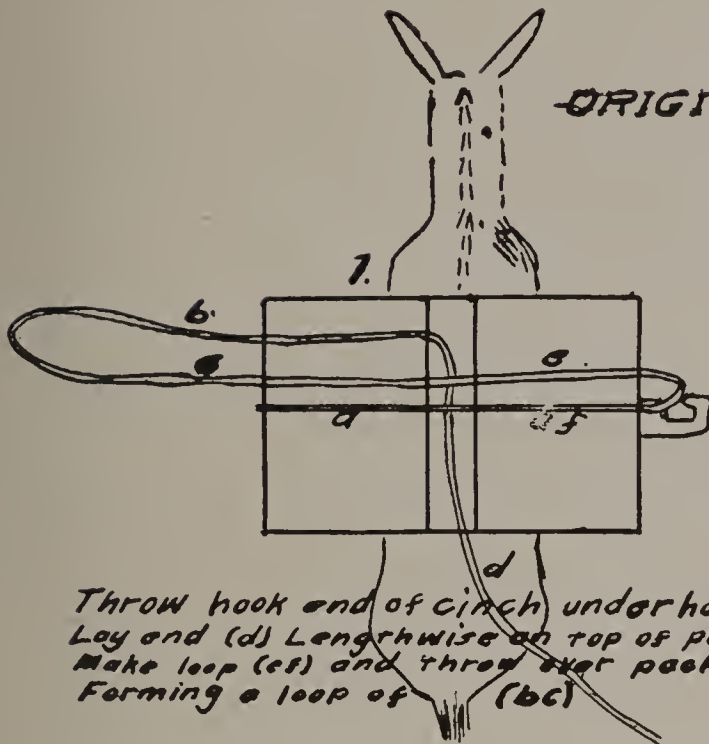
Two ends drawn tightly together and tied



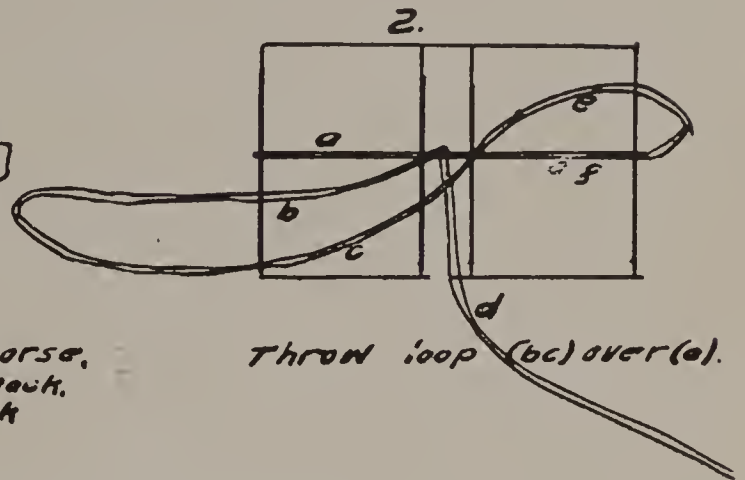
Box Slung to Sawbuck Saddle by Slings

ORIGINAL DIAMOND HITCH

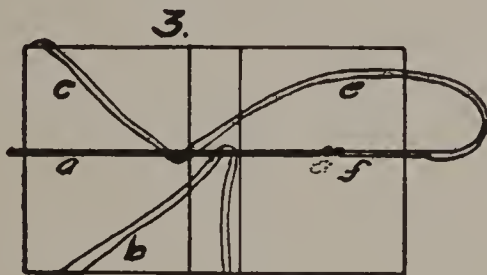
Cy J. Bingham



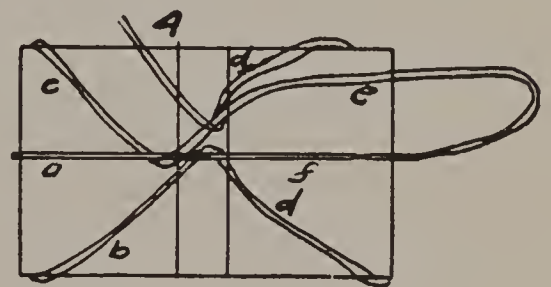
Throw hook end of cinch under horse.
Lay end (d) lengthwise on top of pack.
Make loop (ef) and throw over pack
Forming a loop of (bc)



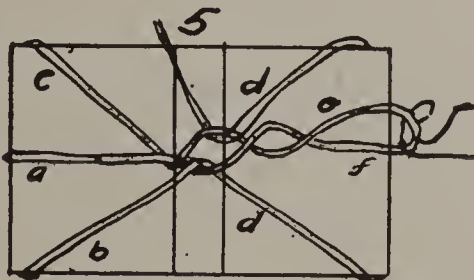
Throw loop (bc) over (e).



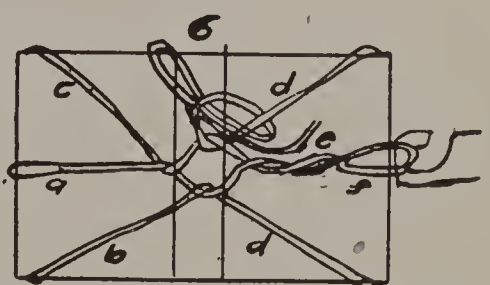
Throw (c) over (b) and
under (e) and form
loop around left after



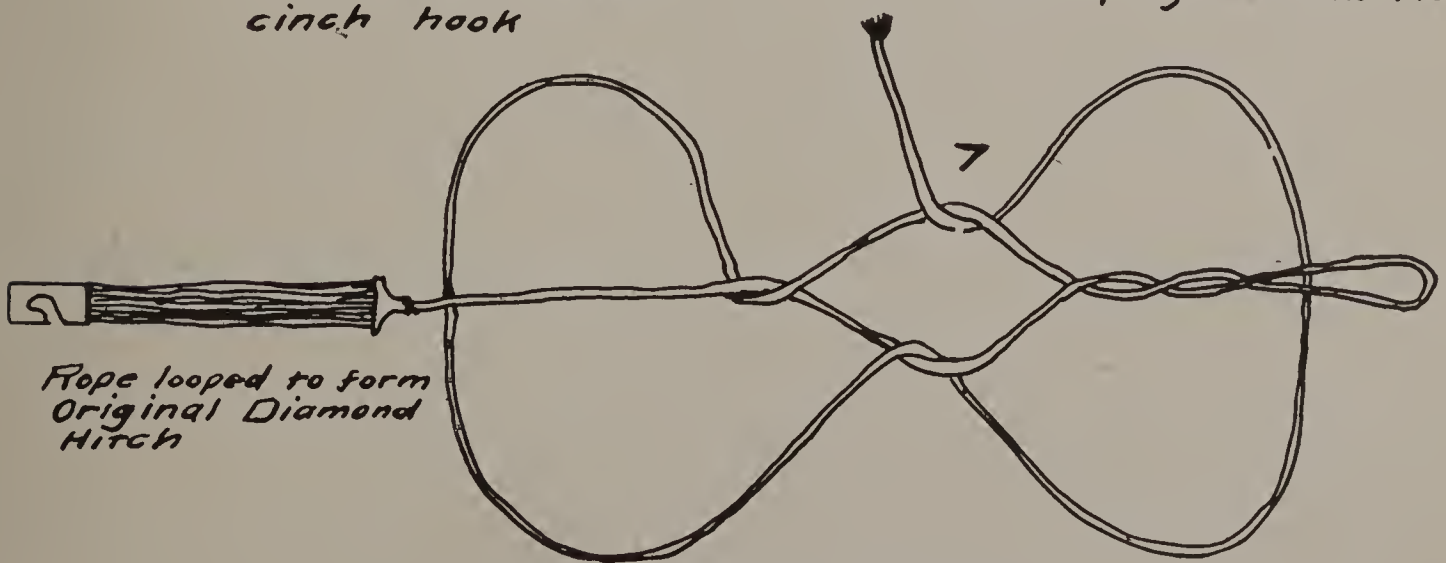
Carry end (d) under right
also so and thread un-
der (e) on top of pack.



Twist (ef) and hook in
cinch hook



Cinch, tighten and tie



Rope looped to form
Original Diamond
Hitch

Figures illustrating details of the diamond hitch.

over the front crosstree. The ends are then looped over the rear crosstree to form the slings from which the packs are hung. The sling is adjusted to the proper position, and when both side packs have been slung the ends of the sling rope are tied together across the center of the saddle.

Too much care can not be used in arranging the pack before loading it on the animal. The side packs should be as evenly balanced as possible, either in alforjas or boxes. They should hang well down on the sides and not up on the back of the pack animal. Light stuff, such as bedding, camping utensils, etc., may be placed on top, but be sure that the bulk of the load is well down on the side, as this has a tendency to give the animal more perfect control of the load in making a quick move, such as jumping logs or ravines. If the load is all on top, the animal, no matter how quiet and careful, is bound to hurt its back from the free pivot swing of the saddle and load.

The original diamond hitch, as shown in figure 7, on page —, may be thrown by one or two persons. When loosened and taken from the horse there are no knots or tangles to be taken out of the rope. The load may be tightened in a few seconds when one has had a little practice. Figure 1 shows the first move to be made with the rope. If one person is packing, he should stand on the off side of the horse to start. If there are two persons, the one on the near side is the one to start the operation. Figure 2 shows the position of the rope after it has been hooked. Figure 3 shows the position of the rope after it is placed under the corner of the alforja or pocket. Figure 4 shows how it looks on both sides. Figure 5 shows the rope as tightened, while figure 6 shows the rope tightened and made fast.

CODE OF LOST AND DISTRESS SIGNALS.

When a man is lost or injured and needs help, a signal by shooting should be given. The lost and injured signal is the firing of a gun twice, with an interval of 10 seconds between and one single shot 60 seconds later. If no answer is received, this signal should be repeated after an intermission of 5 minutes. The answer to this signal will be one single shot from the rescuing party, followed by a recognition shot from the lost man.

Care should be taken to get the time between shots as accurate as possible. In the absence of a watch the time can be very accurately judged by counting 10 between the first and second shots and 60 between the second and third shots. Hunters should keep in mind this signal and, if possible, avoid giving it when shooting at game.

The person who is lost should, after hearing an answer to his signal, remain at the place where he gave the signal until the rescuing party arrives; otherwise he may take the opposite direction and not be found at all.

To prepare for an emergency, every hunter or fisherman should carry in his pocket a piece of candle and matches in a water-tight match safe, so that, in case he should get lost or injured, he can readily start a camp fire.

ACCIDENTS.

Preliminary treatment is described for the following more common accidents:

DROWNING.—Remove clothing from upper part of body. Lay patient face down and empty lungs of water by lifting the body by the middle. Then place the patient on his back. Put your finger well back in his throat and clear out mud, leaves, etc. Pull and hold tongue forward with dry handkerchief. To induce artificial respiration kneel at the patient's head and grasp arms below the elbow. Alternately raise both arms upward and backward over the head, making the elbows almost touch the ground; then bring them down again, pressing them against the sides and front of chest. Repeat about 15 times a minute, and continue for at least an hour and a half. As soon as natural breathing begins, give stimulants and warm drinks by teaspoonfuls.

WOUNDS.—Reduce the flow of blood by applying cold water, snow, ice, or poultice; also by elevation of the part injured. If an artery is cut so that the blood spurts in jets, stop flow of blood by pressing against bone or muscle. If injury is to limb, tie band tightly around it near the wound and between the wound and the heart.

SUNSTROKE.—Get patient in shade at once. Lay him on his back and apply cold water to head and neck. Do everything possible to reduce temperature of body and rapidity of pulse.

MAD DOG OR SNAKE BITE.—Apply a tourniquet between the wound and heart, loosening it from time to time. Suck wound but be sure you have no open cuts or sores on lips or mouth. In snake bite a heart stimulant should be administered. A good treatment consists of hypodermic injections of potassium permanganate near the puncture; also give strychnine hypodermically or in tablets to keep up heart action.

PTOMAINÉ POISONING.—Ptomaines are a common source of poisoning and most frequently occur in canned meats, fish, etc. An effort must be made at once to empty the stomach by vomiting, which may be induced by tickling the throat with feather or finger, or drinking warm water with mustard. Laxatives, such as Epsom or Rochelle salts or castor oil, should be given freely. Stimulants should be given and heat and rubbing applied after the elimination of the poison.

ADMINISTRATION OF THE NATIONAL FORESTS.

The Forest Service is a bureau of the United States Department of Agriculture and is in charge of the Forester, whose headquarters is in Washington, D. C. The National Forests are divided into seven districts in the West and Alaska and one district in the Eastern States. The National Forests of Oregon and Washington are in the North Pacific District, in charge of the district forester, whose headquarters is in the Post Office Building, Portland, Oreg.

Simplicity is the principal characteristic of the Forest Service organization. No red tape is allowed to interfere with the work of the men in the field. Each National Forest is in direct charge of a forest supervisor, with headquarters in a town conveniently near the Forest, and is divided into ranger districts, each in charge of a forest ranger. A large part of the business of the Forest can be carried on with the rangers and most of the remainder with the forest supervisors. The larger questions of policy and administration are referred to the district forester.

The timber that is mature and ready for cutting is offered for sale to the highest bidder. When a sale is made, the trees to be cut are marked or otherwise designated by a forest officer, provision being made for the preservation of the young growth and the perpetuation of the Forest. The purchaser of National Forest timber is required to dispose of the logging slash in such a way as to prevent its becoming a fire menace.

As the result of great forest fires there are here and there on the National Forests large burns which are completely deforested and which can be reclaimed only by the artificial planting of small trees or sowing of tree seed. Such areas the Forest Service is reclaiming by planting young trees grown in the service nurseries. About 1,500,000 small trees are planted annually in the National Forests of Oregon.

On most of the National Forests there are areas with a growth of grass or annual forage plants suitable for the grazing of sheep or cattle. These are allotted to the sheepmen and cattlemen for a regular fee of so much per head of stock per season. Settlers who live within or near a Forest are allowed to graze a small number of domestic stock free of charge. Care is taken to see that each settler and stockman gets his fair allotment of range, and that the range is not overgrazed and spoiled for the next grazing season.

The greatest menace to the Forest is fire, and the Federal Government spends annually on the National Forests of Oregon about \$60,000 for patrol work and from \$5,000 to \$80,000 for actual fire fighting. On each of the Forests in Oregon there are several lookouts who are stationed on the higher peaks and ridges. Upon these the Forest Service depends for the speedy discovery of fires. It is intended that all parts of every Forest shall be under constant observation during the summer season.

The lookout is housed in a small cabin and provided with a fire finder and field glasses for determining the location of fires. Telephone lines enable him to report the fire to the district ranger. In 1920, 1921, and 1922, Army airplanes were successfully used in Oregon to discover and report Forest fires. Once a fire is discovered and located, it is the business of the ranger to put it out. Tools are always ready at the ranger stations and in special boxes at strategic points in the Forest. The ranger and his guards and patrolmen are always ready for prompt action, and the majority of fires are reached and extinguished inexpensively by a small crew before they spread to large proportions. If the fire is too large for the ranger to handle, the Forest supervisor takes charge and by means of plans made in advance is able to secure on short notice experienced crews of fire fighters, transportation, and large supplies of tools, equipment, and food for the men who may have to spend a week or more on the fire line. The main job of the Forest officers is the prevention and suppression of forest fires.

For the purpose of making the timber more accessible, for facility in getting to fires quickly, and for opening up the Forest to the people, the Forest Service has built in all the National Forests, a total of 4,786 miles of roads and 30,000 miles of trail. Ten per cent of the receipts from timber sales, grazing fees, leases of summer-home sites, water-power sites, etc., is used for building roads and trails for the benefit of the public, and another 25 per cent of all National Forest receipts is paid annually to the States by the Federal Government for the benefit of schools and roads in the counties in which the National Forests are located. From this fund Oregon has received to date a total of \$1,263,495,000. In 1916, Congress appropriated \$10,000,000, to be used at the rate of \$1,000,000 a year for the construction of National Forest roads. This has made possible the building of roads on a much larger scale than had hitherto been possible. On November 9, 1921, Congress passed the Federal highway act which provides for two main road construction programs—that of Forest highways, and that of Forest development roads. The Forest highway work is carried on in close cooperation with the Bureau of Public Roads of the Department of Agriculture.

The Forest highway program, as laid down by the Secretary, is based on the following principles: The tying in of the system with adjacent Federal and State road programs; the interests of communities within, adjoining, or adjacent to the National Forests; service to the National Forests by increasing their value and usefulness; benefit to forest development, protection, and administration.

FISH AND GAME PROTECTION.

The heavily timbered areas of Oregon are the natural game sanctuaries of the State. These areas are largely within the National Forests, and are subject to the protection which goes with true forest conservation, which insures to the sportsman and the public in general not only good hunting grounds but a permanent supply of wild game. The fish and game laws applying in the National Forests are those enacted by the Oregon State Legislature. Every hunter and fisherman should familiarize himself with these laws, a copy of which will be furnished by the State game warden at Portland.

UNPROTECTED BIRDS.

Game and fish protective work is one of the regular official duties of all field Forest officers, who are commissioned as deputy State game wardens.

A regulation has somewhat recently been approved by the Secretary of Agriculture, which provides:

The going or being upon any land of the United States, or in or on the waters thereof, within a National Forest, with intent to hunt, catch, trap, wilfully disturb or kill any kind of game animal, game or nongame bird or fish, or to take the eggs of any

such bird, in violation of the laws of the State in which such land or waters are situated is hereby prohibited.

There is effective cooperation in the administration of the Oregon game laws. An agreement is in effect between the Fish and Game Commission, the Oregon State Board of Forestry, and the Federal Forest Service for the purpose of coordinating these departments in the protection of game, fish, birds, and forests. The Federal Forest Service, by reason of its organization and distribution of officers and men and their familiarity with mountain regions and forest streams throughout the State, has assumed full charge and expense of the distribution of fish from railroad points within territory adjacent to and administered by the Forest Service. Annual reports are to be filed showing the results of such stocking of lakes and streams.

Under the terms of this agreement it is the duty of all forest officers of the State and Federal Forest Service to cooperate in game protection, and by personal action and attitude assist in creating public sentiment for enforcement of the laws for the protection of game.

It is the duty of all officers of the State Fish and Game Department to extinguish any small fires they may discover, both inside and outside the National Forests throughout the the State. All fires discovered by them, whether they extinguish them or not, are to be reported at once to the nearest United States Forest officer, if on or contiguous to National Forests, or to the nearest fire warden if outside National Forests.

HANDLING KILLED DEER.

There are several ways of carrying a deer after killing. The following method is one used by a great many experienced hunters:

After removing entrails, cut the skin around the legs close to the hoofs below the dewclaws, then split the skin of the leg to above the knee joint. Cut legs off at knee joint and skin out, then tie skin of legs together by tying skin of right foreleg to skin of left hind leg and vice versa. Then place the deer on a log or upper hillside, run arms through loops formed by tying legs, get them well up on the shoulders, and rise. The deer will then hang crosswise on the back. The pack can be regulated for comfort by lengthening or shortening the leg ties.

For packing one deer on a horse the following will be found very simple: Take a small rope, place double half hitch over horn of saddle, belly down (and it is best to turn the legs slightly to the rear) and let the weight rest just back of the forelegs. Take a half hitch around flank with hitch underneath, then pass rope through cinch ring. Repeat on opposite side, putting hitch just back of forelegs. Balance the deer in saddle, tighten the ropes, and fasten them. The head and horns can be twisted around and tied to the horn of the saddle.

To skin a deer, swing it clear of the ground by the hind feet and then skin down. By this means the hide can be nearly pulled from the carcass after it has been started with a knife here and there, and the meat kept clean. To preserve the hide, stretch it over a log, a tree, or on the side of a building, flesh side out, until it is thoroughly dried, then it will keep and is easily packed.

If it is desired to preserve the head for mounting, the following simple method is satisfactory. Never cut the animal's throat if you wish to mount the head. If it is desired to bleed him, stick a knife in the breast at the base of the neck. To remove the skin from the head and neck, first slit the skin from one horn to the other and carry the cut around the base of each horn. Then from the middle of the cross cut, carry a cut down the middle line of back of neck. The hide can then be removed from the head. Use common table salt to preserve the scalp. Lay the skin flesh side up and rub plenty of salt into all parts of it. Be careful to put plenty behind the ear cartilages and around the nose.

One of the hardest problems which confront the hunter after killing his deer is taking care of the meat, especially in hot weather when the flies are bad. It is a good idea to take two or three sacks along made from house lining or cheesecloth. These sacks should be made about 6 feet long by 2 feet wide. The hunter can carry one of these bags along when hunting. If a deer is killed, remove the entrails, hang it up so it will drain, and slip the bag over it; fasten it so flies can not get in. A deer can be left hanging in this manner and brought to camp on a horse later. The same method should be adopted after the deer has been skinned in camp. Late

in the season when the nights are cool, by keeping flies off in this manner, a deer can be kept fresh for several days, and in some cases for a week or two.

Nearly every hunter has his own ideas about making "jerky." The meat should be cut into strips from 2 to 3 inches thick and dipped in boiling hot brine. Build a rack with long sticks (wire screen is better), smoke with green maple or other hardwood until the meat is seared over so flies will not bother. After this, it is best to dry it in the sun as much as possible. When smoking, do not allow the fire to blaze or the meat will be cooked instead of jerked.

SIX RULES FOR SPORTSMEN.

1. *Be a real sportsman.*—There is more honor in giving the game a square deal than in getting the limit.
2. *Make sure it's a buck.*—If you can't see his horns—she hasn't got any.
3. *Help to enforce the game law.*—Game and fish are public property—only a game hog will take more than his fair and legal share. Violations should be reported to the nearest deputy warden, Forest ranger, or game protective association.
4. *Respect the ranchman's property.*—He regards as an outlaw the man who leaves his gates open, cuts his fences, disturbs his livestock, or shoots near dwelling. Put yourself in his place.
5. *Be careful with your camp fire and matches.*—One tree will make a million matches; one match can burn a million trees.
6. *Leave a clean camp and a clean record.*—Unburied garbage, crippled game, and broken laws are poor monuments for a sportsman to leave behind him.

NATIONAL FORESTS IN THE STATE OF OREGON



The National Forests in Oregon.



